

# JVC

## SERVICE MANUAL

### CD PORTABLE SYSTEM

**PC-X100J**



**Area suffix**

J ..... U.S.A.

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# 1 Safety Precautions

- The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer or responsibility for personal injury or property damage resulting therefrom.
- Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by ( $\Delta$ ) on the schematic diagram and Parts List in Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List in Service Manual may create shock, fire, or other hazards.
- The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.

When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

## 5. Leakage current check (Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

Do not use a line isolation transformer during this check.

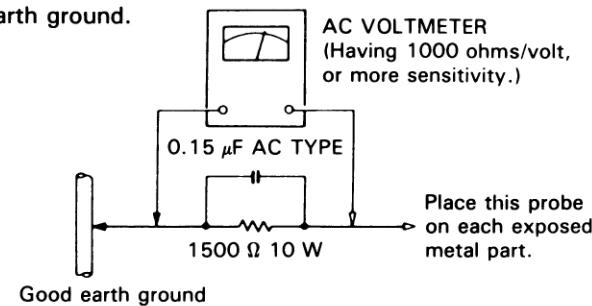
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a  $1,500 \Omega$  10 W resistor paralleled by a  $0.15 \mu\text{F}$  AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.).

This corresponds to 0.5 mA AC (r.m.s.).

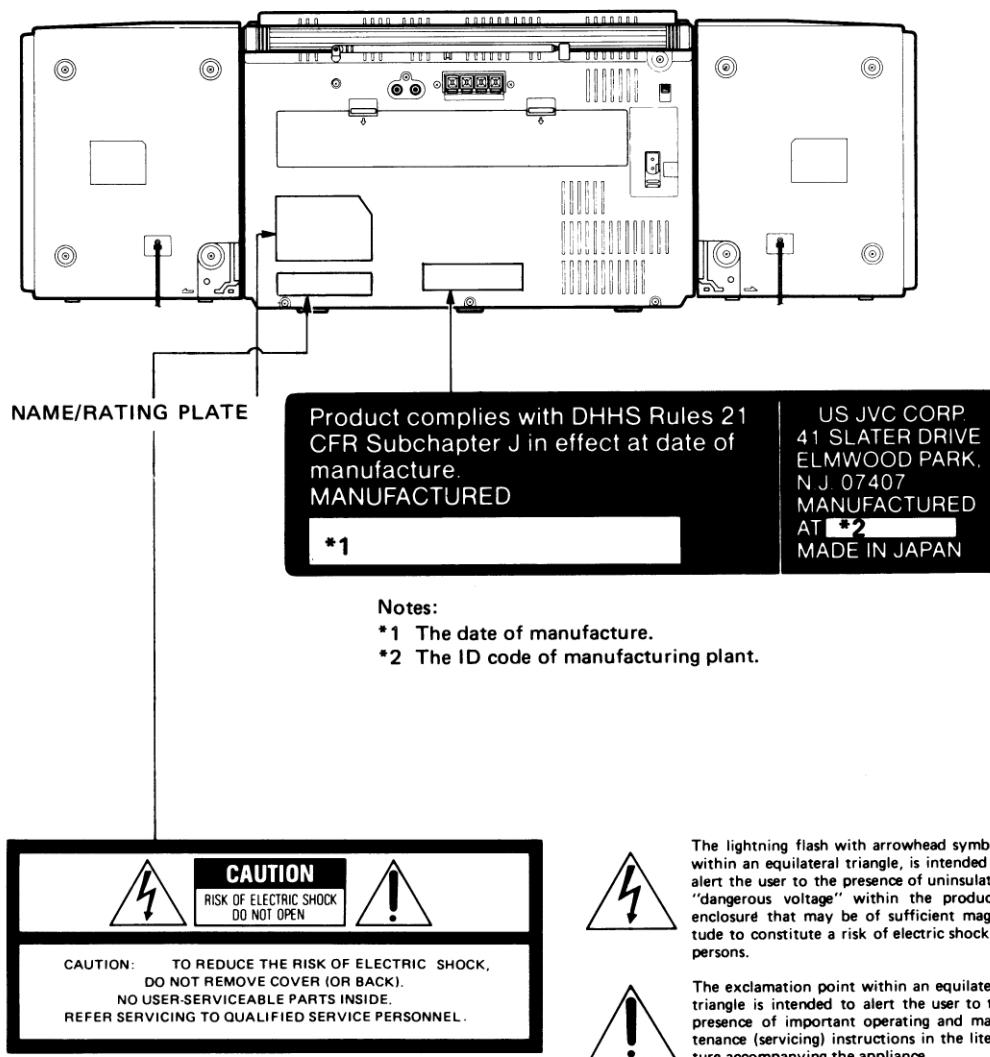


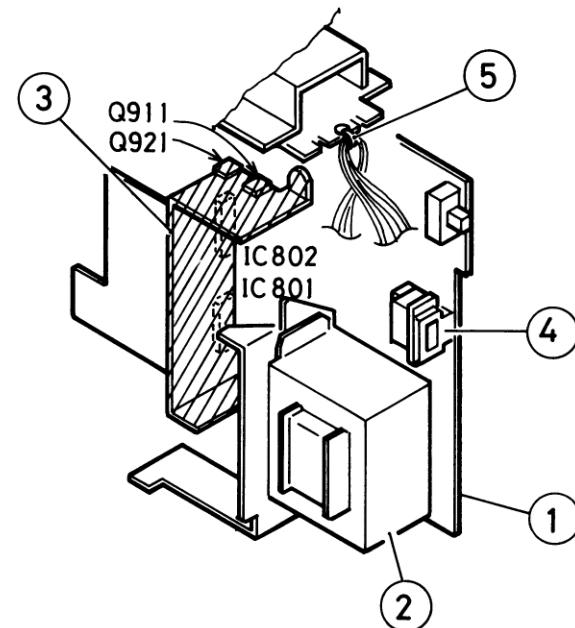
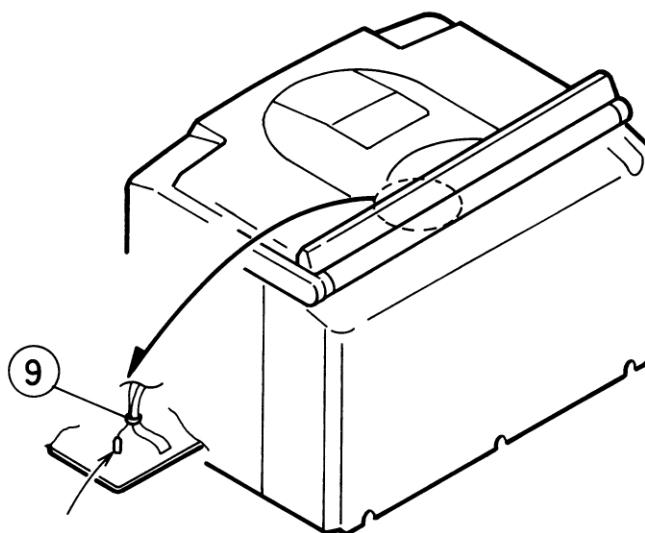
## 2 Safety Precautions about PC-X100

### Important for Laser Products (For U.S.A. only)

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: Do not open the bottom cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. CAUTION: The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the disc holder is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION: Use of controls of adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
6. CAUTION: The laser is able to function, if safety switches are out of function. The laser light is invisible, avoid exposure, do not disassemble the laser unit, but replace the complete unit.

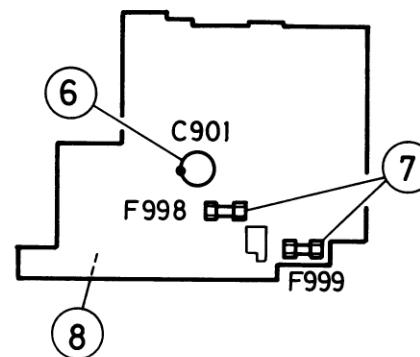
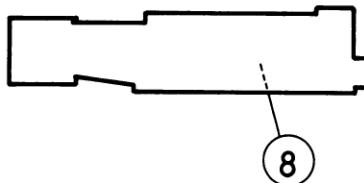
### Identification Label and Certification Label





Amp Board

CD SW Board



Tuner Board

1. In order to maintain the gap between the circuit board's primary circuit pattern and the adjacent primary circuit, make sure that there is no protruding solder on the soldering round.
2. Confirm that the approval No. of the power transistor is J-71F032HD, and to prevent the patterns from getting lost, check that there is no looseness in the circuit board fixation screw.
3. As the heat sink, IC801, 802 and Q911, Q921 are heat producing parts, make sure that wires and the E cap do not come in contact with them.
4. Confirm that the AC socket is provided with the number J-HSC1494, and that the pattern is well fixed.

5. Make sure that all parts producing heat are clamped properly.
6. Make sure that  $4700 \mu\text{F}$ , 25 V is used for C901.
7. The rated PCB indication and the mark of the fuse cap are as follows.

Symbol No.	PCB indication	Fuse mark
F998	5 A / 125 V	UL 125 V / 5 A
F999	600 mA / 250 V	UL 600 mA / 250 V

8. Make sure that all support parts are bonded and fixed with spacers.

## 3 Features

1. Portable system incorporating multi-function CD player.
  - CD player with program play of up to 20 tunes/repeat play/random play/intro play function.
  - Digital LCD (Liquid Crystal Display) indicates the playback time of each tune and the number and total playback time of programmed tunes.
  - 8-cm (3-3/16") "CD singles" capability.
2. Synchro-record start for CD recording convenience.
3. Double-cassette mechanism (Deck A for recording and playback, Deck B for playback).
  - Metal and CrO<sub>2</sub> tape can be played back, for superior tone quality.
  - Synchro start dubbing function (normal/high-speed dubbing).
  - Relay playback (from Deck B to Deck A).
  - Full auto-stop mechanism.
4. Hyper-Bass Sound system with 3D super woofer.
5. CD OUT jacks.

## 4 Specifications

### Compact disc player section

Type	: Compact disc player
Signal detection system	: Non-contact optical pickup (semiconductor laser)
Number of channels	: 2 channels (stereo)
Frequency response	: 20 Hz – 20,000 Hz
Signal-to-noise ratio	: 76 dB
Wow & flutter	: Less than measurable limit
<b>Radio section</b>	
Frequency ranges	: FM 88 – 108 MHz AM 540 – 1,700 kHz
Antennas	: Telescopic antenna for FM Ferrite core antenna for AM
<b>Tape deck section</b>	
Track system	: 4-track 2-channel stereo
Motor	: Electronic governor DC motor for capstan
Heads	: Deck A; Hard permalloy head (for recording/playback), Permalloy head for erasure Deck B; Hard permalloy head for playback
Frequency response	: 40 – 14,000 Hz (with normal tape/normal speed)
Wow & flutter	: 0.15 % (WRMS)
Fast wind time	: Approx. 120 sec. (C-60 cassette)
<b>General</b>	
3D system	: ASW (Acoustic Super Woofer)
Power output	: 3 watts per channel, min. RMS, at 6 ohms from 200 Hz to 15 kHz and 6 watts for 3D, min. RMS, at 8 ohms from 50 Hz to 150 Hz, with no more than 10 % total harmonic distortion
S.E.A. characteristics	: S.E.A. center frequencies: 100 Hz/1 kHz/10 kHz S.E.A. control range: ± 8 dB

### Output terminals

: CD OUT x 2  
1.0 V/47 kΩ  
Speaker x 2 (matching impedance  
6 – 16 Ω)  
PHONES x 1

### Power supply

(Output level: 0 – 15 mW/32 Ω,  
Matching impedance: 16 Ω – 1 kΩ)

: AC 110 – 120 V/220 – 240 V,  
50/60 Hz

### Power consumption

: DC 12 V (8 "D" batteries)  
35 W (with POWER SW ON)

### Dimensions

: 2.1 W  
(with POWER SW STANDBY)

: 676 (W) x 235 (H) x 248 (D) mm  
(26-5/8" x 9-5/16" x 9-13/16")  
including knobs

### Weight

: Approx. 7.3 kg (16.1 lbs)  
(without batteries)  
Approx. 8.1 kg (17.9 lbs)  
(with batteries)

### Speaker Section (each unit)

Speakers : 10 cm (3-15/16") x 1

Impedance : 6 Ω

Dimensions : 170 (W) x 204 (H) x 192 (D) mm  
(6-3/4" x 8-1/16" x 7-9/16")

### Weight

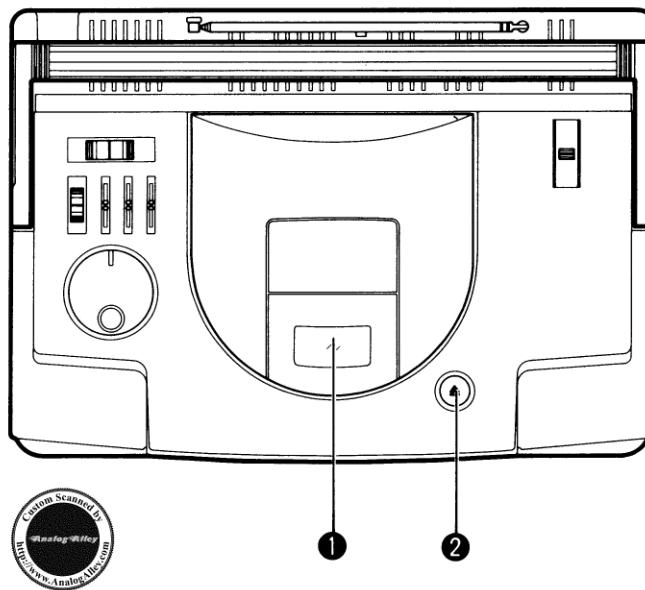
: Approx. 0.96 kg (2.2 lbs)

Design and specifications are subject to change without notice.

# 5 Instruction Book

## NAMES OF PARTS AND THEIR FUNCTIONS

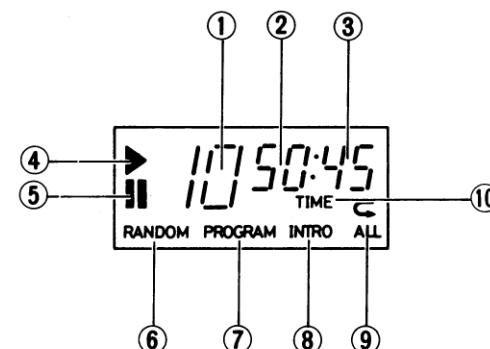
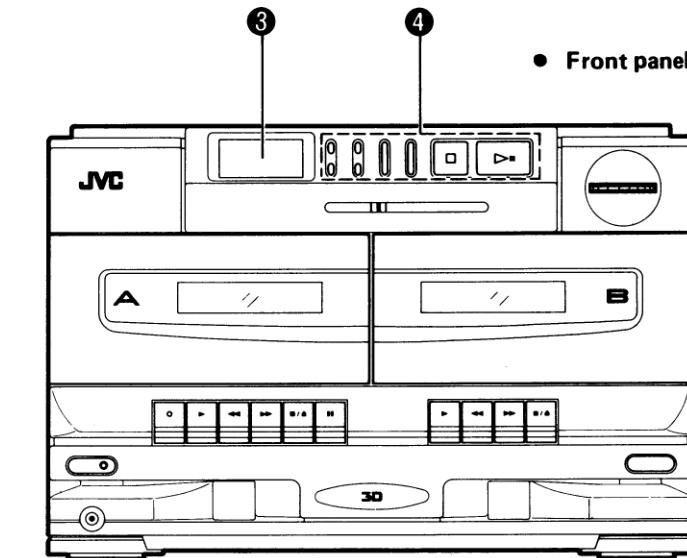
### • Top panel



- ① Disc holder
- ② Disk holder open button (PUSH OPEN) (▲)

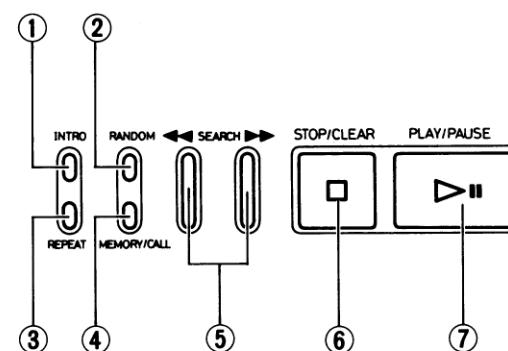
### ③ Display window (CD player section)

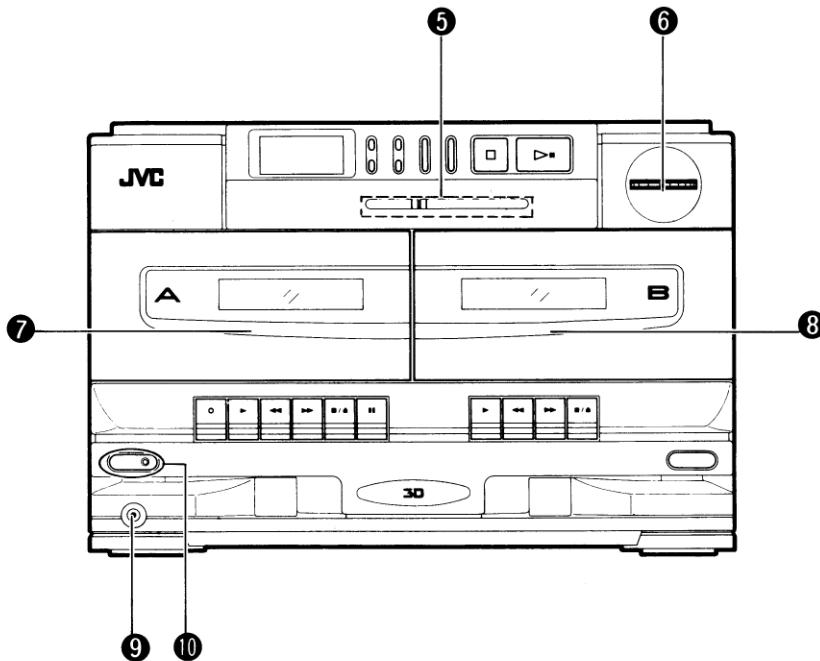
- ① Track (tune) number display
- ② Program order number/Time (minute) display
- ③ Time (second) display
- ④ Playback indicator (▶)
- ⑤ Pause indicator (■)
- ⑥ RANDOM playback indicator
- ⑦ Program mode indicator (PROGRAM)
- ⑧ INTRO scan indicator
- ⑨ Repeat playback indicator (◀ ALL)
- ⑩ TIME mode indicator



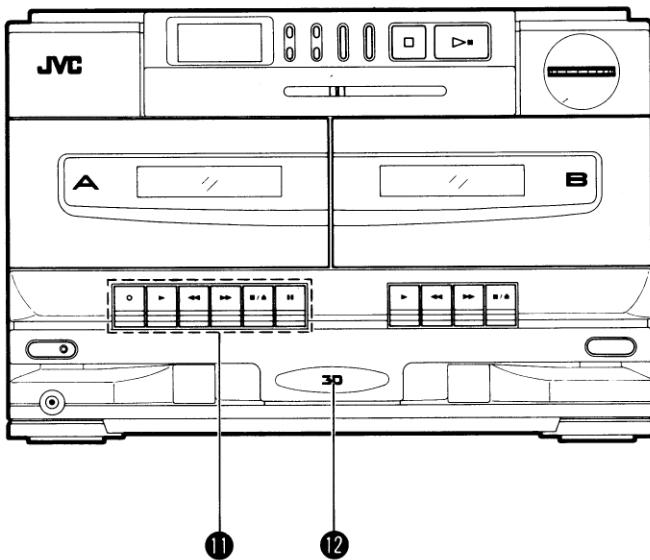
### ④ CD operation buttons

- ① INTRO scan button
- ② RANDOM button
- ③ REPEAT button
- ④ MEMORY/CALL button
- ⑤ SEARCH (◀◀ / ▶▶) button
- ⑥ STOP/CLEAR (□) button
- ⑦ PLAY/PAUSE (▶■) button

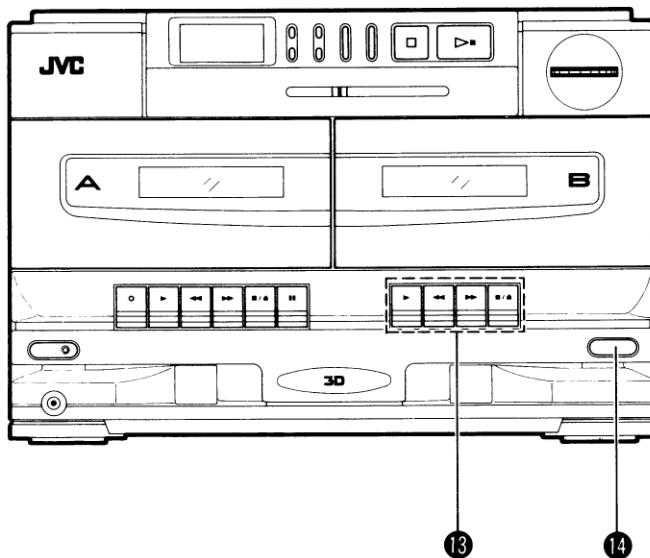




**5** Dial scale  
**6** TUNING knob  
**7** Cassette holder (Deck A)  
**8** Cassette holder (Deck B)  
**9** PHONES jack (3.5 mm dia. stereo mini)  
 Connect headphones (impedance 16 Ω – 1 kΩ) to this jack. The speakers are automatically switched off with the headphones connected.  
**10** POWER switch and indicator



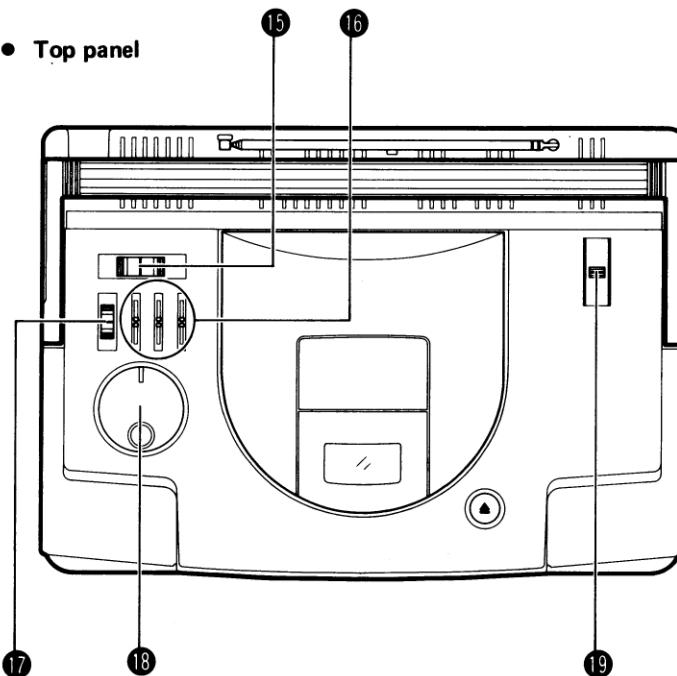
**11** Cassette operation buttons (Deck A)  
 ○ REC:  
 Press this button with the ▶ PLAY button to start recording.  
 ▶ PLAY:  
 Press to play the tape.  
 ◀ REW:  
 Press to rewind the tape rapidly.  
 ▶▶ FF:  
 Press to wind the tape forward rapidly.  
 ■/▲ STOP/EJECT:  
 Press to stop the tape. Pressing this button after the tape stops opens the cassette holder.  
 ■ PAUSE:  
 Press to stop the tape temporarily. Press again to release the pause mode.  
**12** Hyper-Bass Sound (3D) indicator



**13** Cassette operation buttons (Deck B)  
 ▶ PLAY:  
 Press to play the tape.  
 ◀ REW:  
 Press to rewind the tape rapidly.  
 ▶▶ FF:  
 Press to wind the tape forward rapidly.  
 ■/▲ STOP/EJECT:  
 Press to stop the tape. Pressing this button after the tape stops opens the cassette holder.

**14** HYPER-BASS switch  
 ▲ ON:  
 Set to this position to listen to the Hyper-Bass sound.  
 ▾ OFF:  
 Set to this position when the Hyper-Bass sound is not required.  
 • This function does not work while headphones are being used.

## ● Top panel



## ⑯ FUNCTION switch

## TAPE-NORMAL SPEED DUBBING

Set to this position to listen to a cassette or dub at normal speed.

## TAPE-HIGH SPEED DUBBING

Set to this position to dub at high speed.

## TUNER

Set to this position when listening to or recording from the radio.

## CD

Set to this position when listening to or recording from a CD.

## ⑰ 3-BAND GRAPHIC EQUALIZER controls

## ⑯ TAPE (PLAYBACK) switch

Set this switch according to the type of tape to be used.

METAL-CrO<sub>2</sub>: (playback only)

Set to this position to listen to a metal (type IV) or chrome (type II) tape.

## NORMAL:

Set to this position to listen to a normal (type I) tape.

## ⑯ VOLUME control

## ⑯ BAND switch

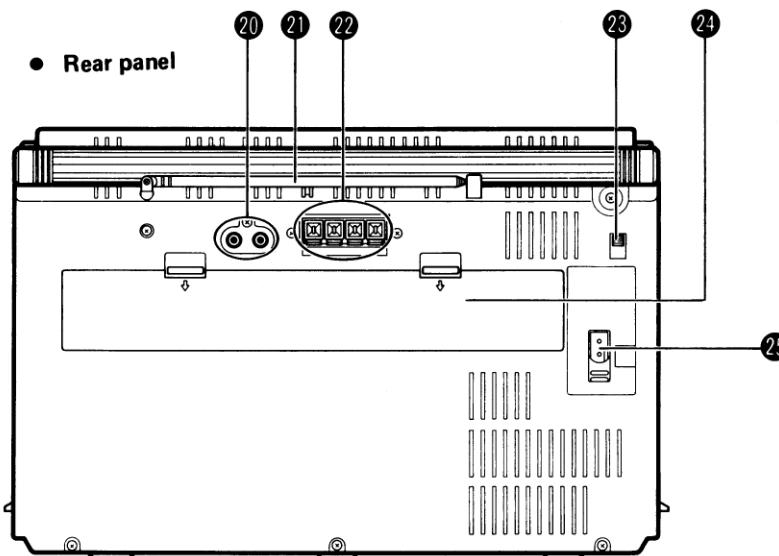
AM: Set to this position to listen to or record an AM broadcast.

FM STEREO: Set to this position to listen to or record an FM stereo broadcast.

FM MONO: Set to this position when FM stereo reception is obscured by noise.



## ● Rear panel



## ⑯ CD OUT jacks

Connect to another stereo amplifier, etc. to listen to the CD sound from other equipment.

## ⑯ Telescopic antenna for FM reception.

## ⑯ SPEAKER terminals

Connect the provided speakers to these terminals.

## ⑯ BEAT CUT switch

(See page 34.)

## ⑯ Battery compartment cover

⑯ VOLTAGE SELECTOR/AC IN (AC input) jack (PC-X100J)  
AC IN (AC input) jack (PC-X100C)

## PLAYING COMPACT DISCS

**Entire tune playback . . .** The following example shows using a compact disc which contains 10 tunes and a total playback time of 50 minutes, 45 seconds.

Track (tune) number.

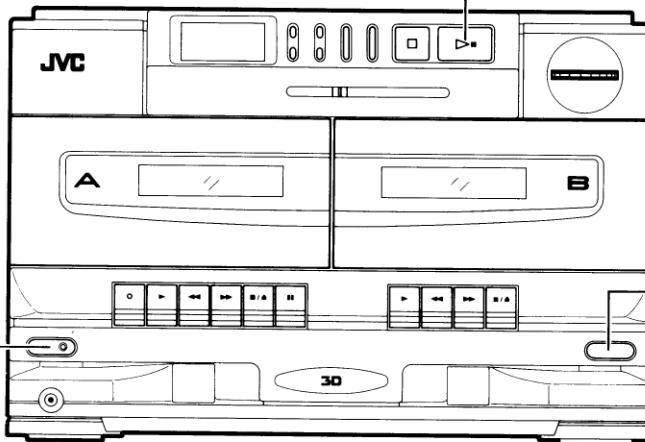


Displays elapsed playback time of each tune being played back.

Operate in order shown.

- 5 Press to start the playback. The track (tune) number and playback time are displayed.

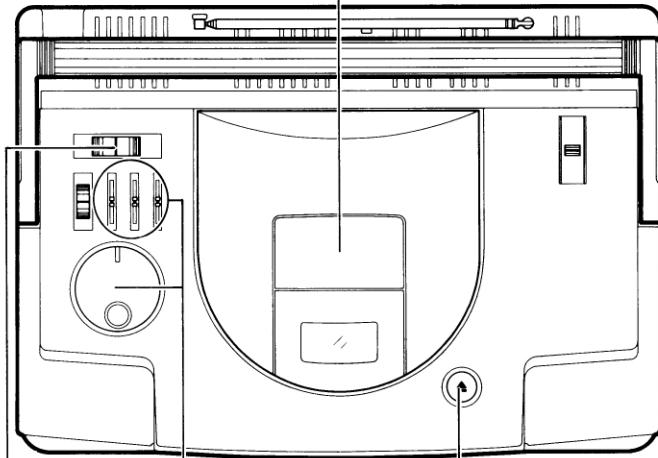
- 1 Set to ON.



Set the HYPER-BASS switch as required.



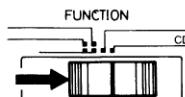
- 3 Load a disc with the label side facing up. Close the disc holder.



- 2 Press to open the disc holder.

- 4 Set to CD.

The disc starts rotating and the total number of track (tune) and total playback time are displayed.



Total playback time.

Total number of track (tune).

- 6 Adjust.

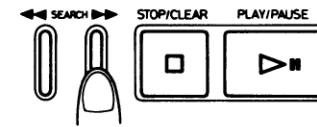


**Skip playback**

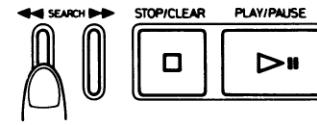
- During playback, when skipping to the beginning of the next tune or the tune being played back or the previous tune, the beginning of the tune is easily located and the playback starts from there.

**To listen to the next tune . . .**

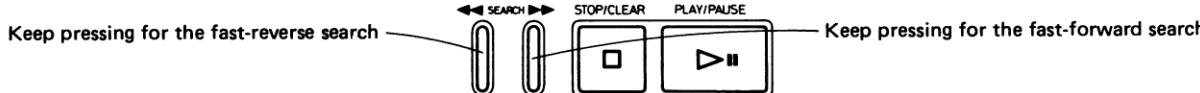
Press the **►►** button once to skip to the beginning of the next tune.

**To listen to the previous tune . . .**

Press the **◀◀** button to skip to the beginning of the tune being played back and press again to skip to the previous tune.

**Search playback (to locate the required position on the disc)**

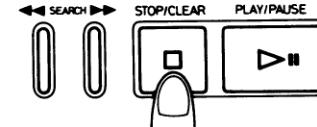
- The required position can be located using fast-forward or reverse search during playback.



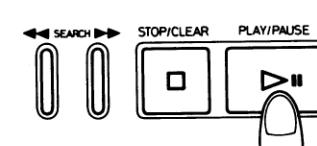
- Hold down the button and the search playback starts slowly and then gradually increases speed.
- Since a small sound (about one quarter of playback level) can be audible in both modes, release the button when the required position is located while monitoring the sound.

**To stop playback****• To stop in the middle of a disc**

During programmed playback, press the **□** STOP/CLEAR button once to stop playback; press again to cancel the program.

**• To stop a disc temporarily**

Press the **►■** PLAY/PAUSE button to stop a disc temporarily. When pressed again, playback resumes from the point where pause was engaged.

**Caution:**

When changing discs, press the **□** STOP/CLEAR button; check that the disc has stopped rotating completely before unloading it.

**Notes:**

- The following indication may be shown when a disc is dirty or scratched, or when the disc is loaded upside down.  
In such a case, check the disc and insert again and clean or change the disc.

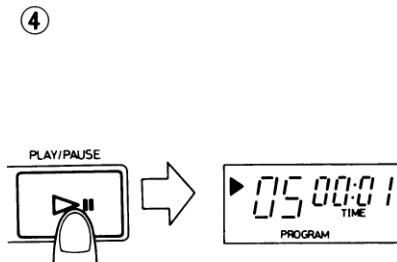
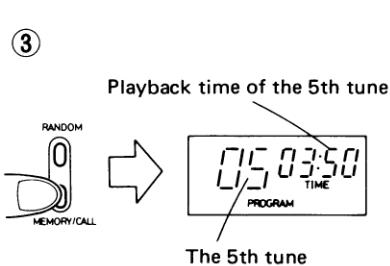
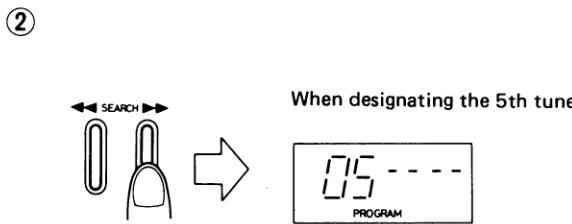
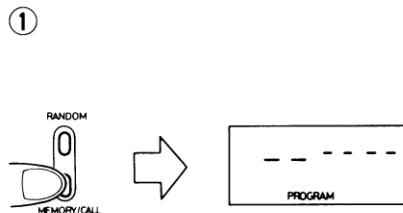
- Do not use the unit at excessive high or cold temperatures.**  
The recommended temperature range is 5°C (41°F) to 35°C (95°F).
- After playback, unload the disc and close the disc holder.
- If mistracking occurs during playback, lower the volume.
- Mistracking may occur if the unit is given a strong impact or is used in a place which is subject to vibrations (i.e. in a car travelling on a rough road).



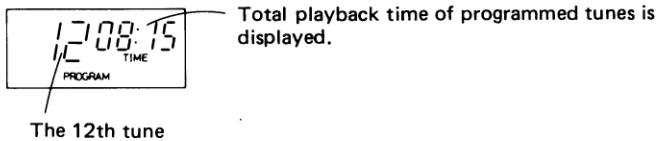
## Programmed playback

- Up to 20 tunes can be programmed.

When there are less than 20 tunes on a disc, the total playback time of programmed tunes is displayed (up to 99 minutes, 59 seconds).



When programming the 12th tune.



- ① Press the MEMORY/CALL button to set to the programming mode.
- ② Press to designate the required track number.
  - To count down the track number, press the button.
- ③ Press the MEMORY/CALL button to program the track (tune) number.
  - Repeat steps ② and ③ to program other tunes.
- ④ Press the PLAY/PAUSE button when programming is completed. Programmed playback starts.

#### To clear programmed tunes . . .

Press the  STOP/CLEAR button before playback. During programmed playback, press this button twice. When the disc holder is opened, the programmed tunes are automatically cleared.

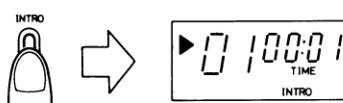
To confirm the details of programmed tunes . . .

When the **MEMORY/CALL** button is pressed, the details of programmed tunes are displayed in the programmed order.



#### INTRO-scan operation

- Just press to play the first 10 seconds of each tune. The operation is released after playing the introductory sections of all tunes or all programmed tunes.
- If the INTRO-scan button is pressed in the middle of a tune, the intro scan operation will start from the next tune.
- To release the intro scan mode, press the INTRO-scan button again and normal playback (or programmed playback) will start.



### Repeat playback

Press the REPEAT button before or during playback. A single tune or all the tunes can be repeated.

A single tune and all the tunes can be specified separately. Each time the REPEAT button is pressed, the mode will be changed from a single tune (⌚) to all the tunes (⌚ ALL) to the clear mode, in this order.



- **Repeat playback of a single tune (⌚)**  
The tune being played back can be heard repeatedly.

The 5th tune



- **Repeat playback of all the tunes (⌚ ALL)**  
When playing back the entire disc or programmed tunes, all the tunes or the programmed tunes can be heard repeatedly.



### Random playback

When the RANDOM button is pressed, every tune in a disc is played back once, in random order.



**CASSETTE PLAYBACK**

(The example shows deck A)

Operate in order shown.

**• Playback in deck B**

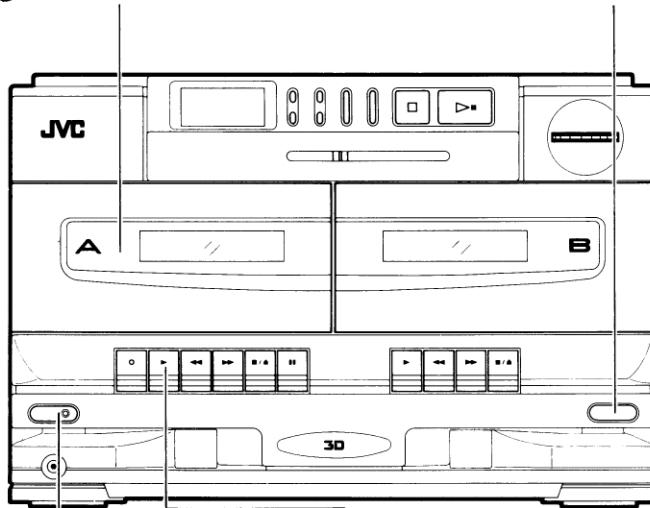
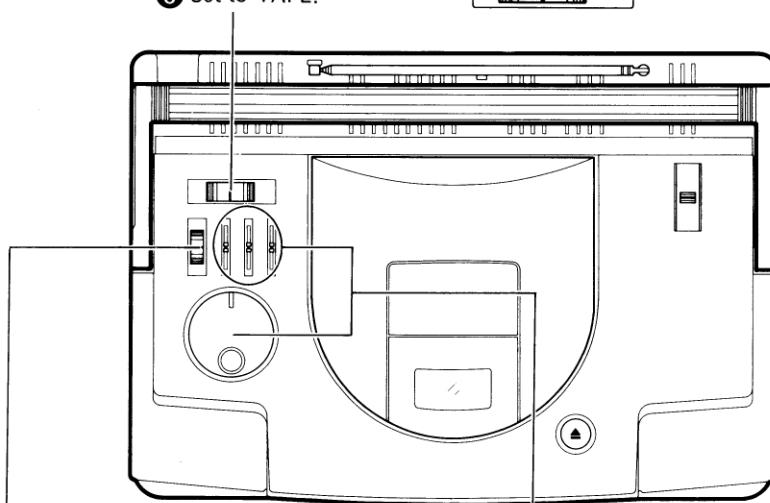
The previous procedures ④ and ⑤ also apply to deck B when a cassette is loaded in deck B. When decks A and B are simultaneously set to the play mode, only the playback sound of deck B is heard.

**Notes:**

- When the power is turned off while the tape is running, cassette operation buttons which are depressed do not return to the original positions.  
Press the ■/▲ STOP/EJECT button to stop the tape running before turning off the power.
- Avoid operating the FF or REW button on the deck during playback of the other deck.

**② Load a cassette.**

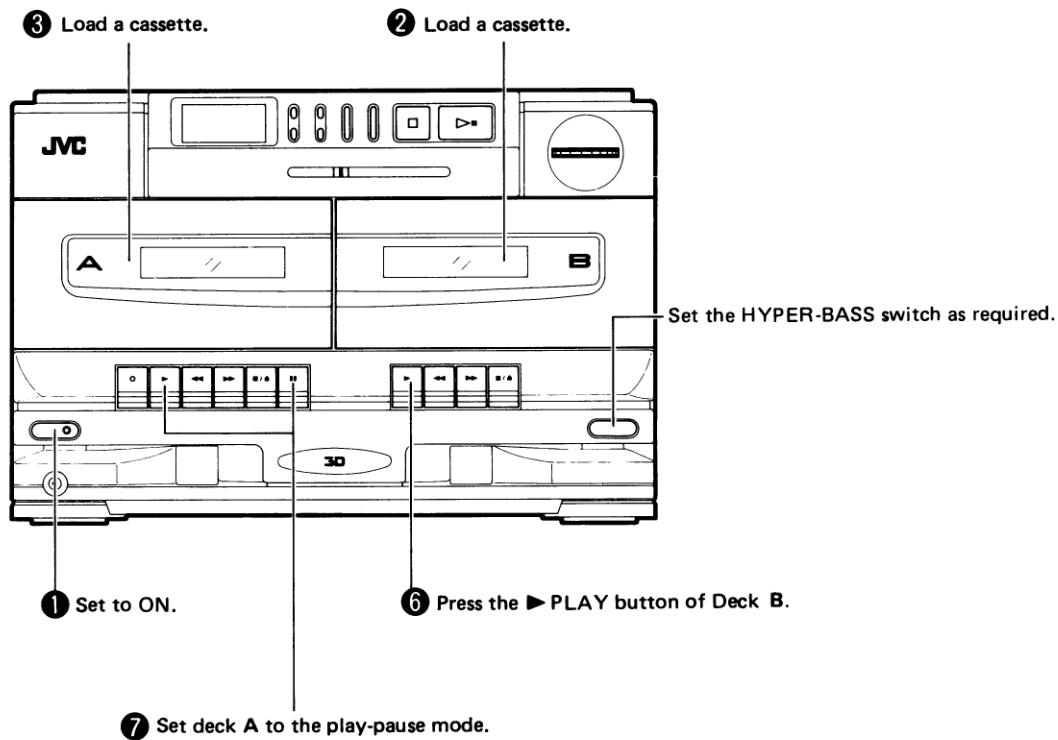
Set the HYPER-BASS switch as required.

**① Set to ON.****⑤ Press to start playback.****③ Set to TAPE.****④ Set the TAPE switch as required.****⑥ Adjust.**

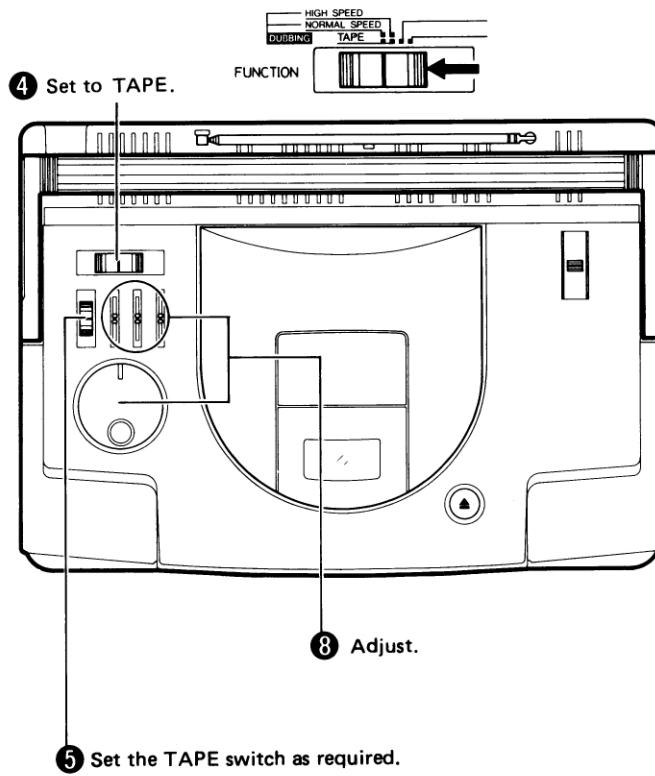
**RELAY PLAYBACK**

(From deck B to deck A)

Operate in order shown.

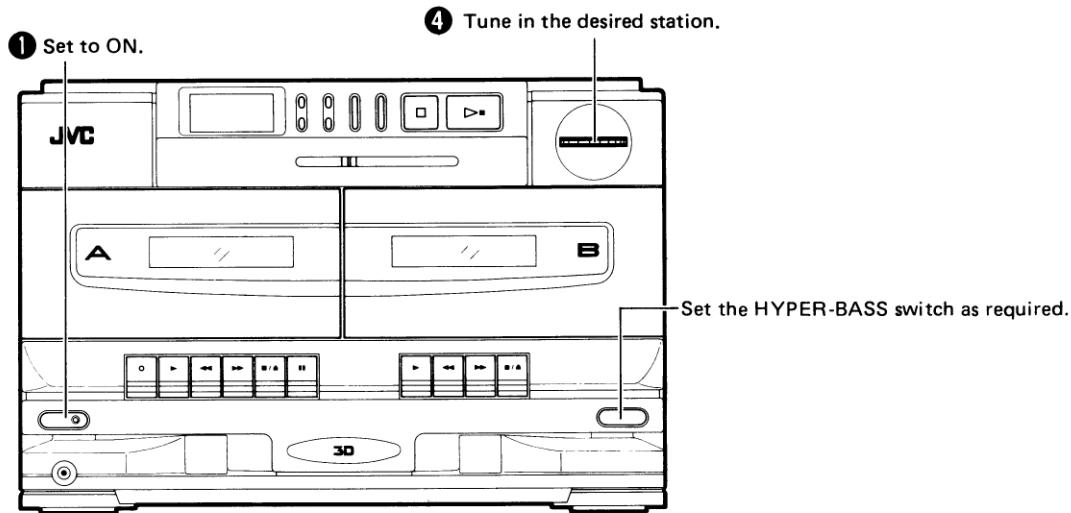
**Notes:**

1. Use the same type of tape in decks A and B.
2. When deck B stops, deck A's pause mode will be released and it will start playback. When deck A stops automatically, relay playback will be released.

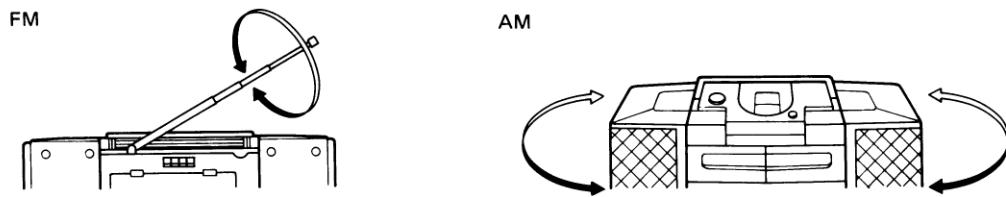


## RADIO RECEPTION

Operate in order shown.

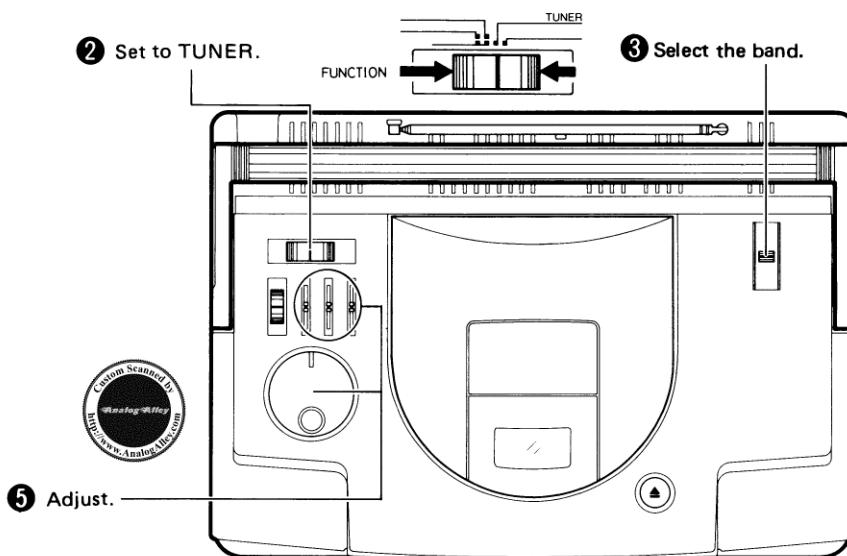


### Using the antennas



#### Note:

The built-in ferrite core antenna can pick up interference tones from television receivers in the neighborhood and thereby disturb AM reception.



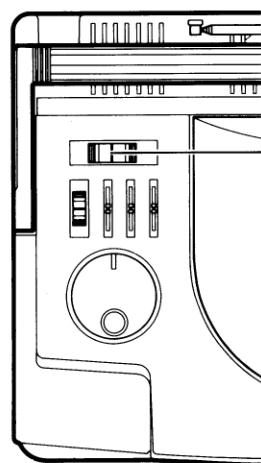
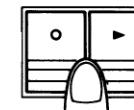
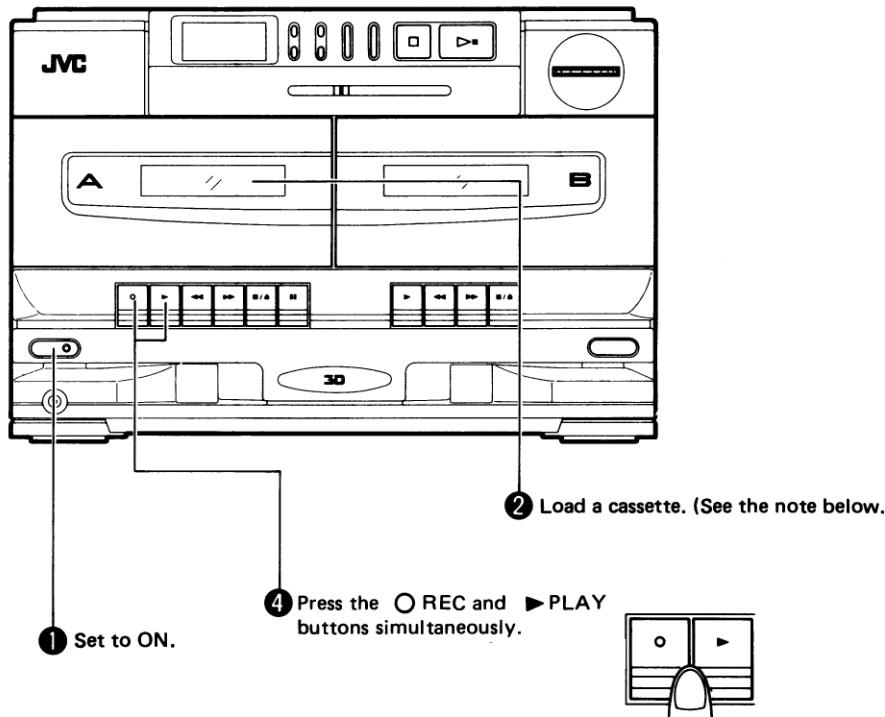
**RECORDING (Deck A)**

- In recording, the ALC circuit automatically optimizes the recording level and adjustment of the recording level is unnecessary.

**Operate in order shown.**

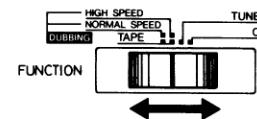
**Notes:**

1. The recording characteristics of this unit are those of normal tape. Normal tape has different characteristics from CrO<sub>2</sub> and metal tapes.
2. Avoid operating the FF or REW button on deck B during recording.



③ Select the recording source.

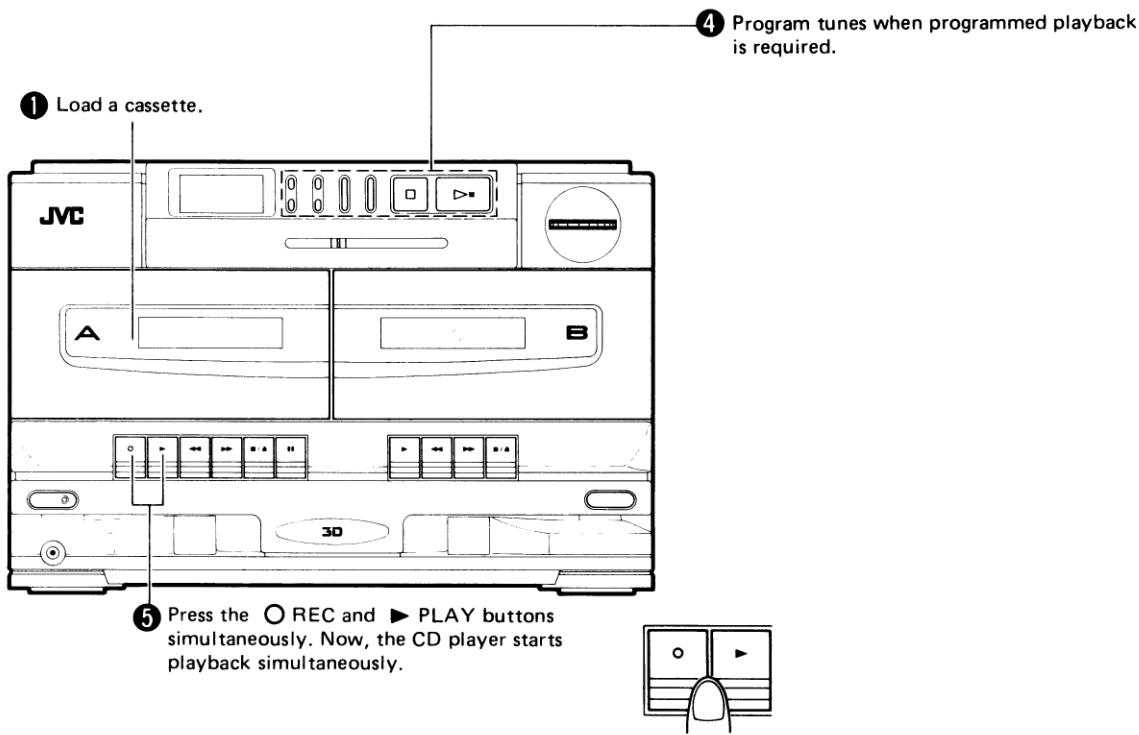
- When dubbing the tape at normal-speed . . . . . TAPE-NORMAL SPEED DUBBING
- When dubbing the tape at high-speed . . . . . TAPE-HIGH SPEED DUBBING
- When recording from the radio . . . . . TUNER
- When recording from the CD player . . . . . CD



### Synchronized recording with the CD Player

- In this system, the CD player starts playback when deck A enters the recording mode.

Operate in order shown.



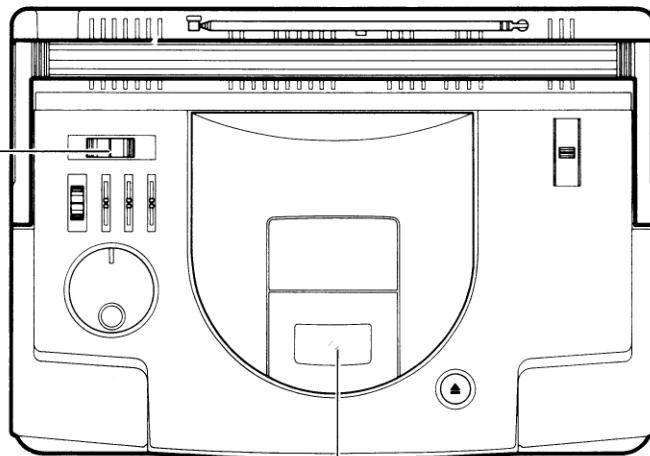
- Non-recorded sections of approx. 4 seconds are left automatically between tunes.

- When the tape reaches the end first, the CD player stops automatically; when the CD player stops first, the tape continues running. In this case, press the STOP/EJECT button to stop the tape.

- When automatic spacing between tunes is not required . . . Perform the following after finishing the previous operation (1 – 4).

- Press the PLAY/PAUSE button of the CD player twice. The CD player enters the pause mode.
- Press the REC and PLAY buttons simultaneously. Now, the CD player starts playback simultaneously.

- In this case, the CD player will not stop automatically even when the tape reaches the end first. To stop the CD player, press the STOP/CLEAR button.

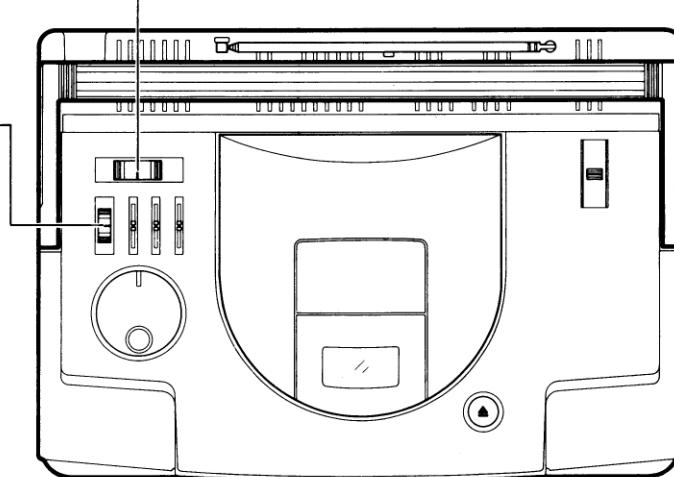
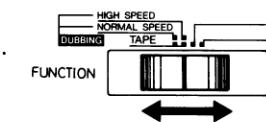
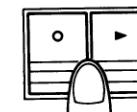
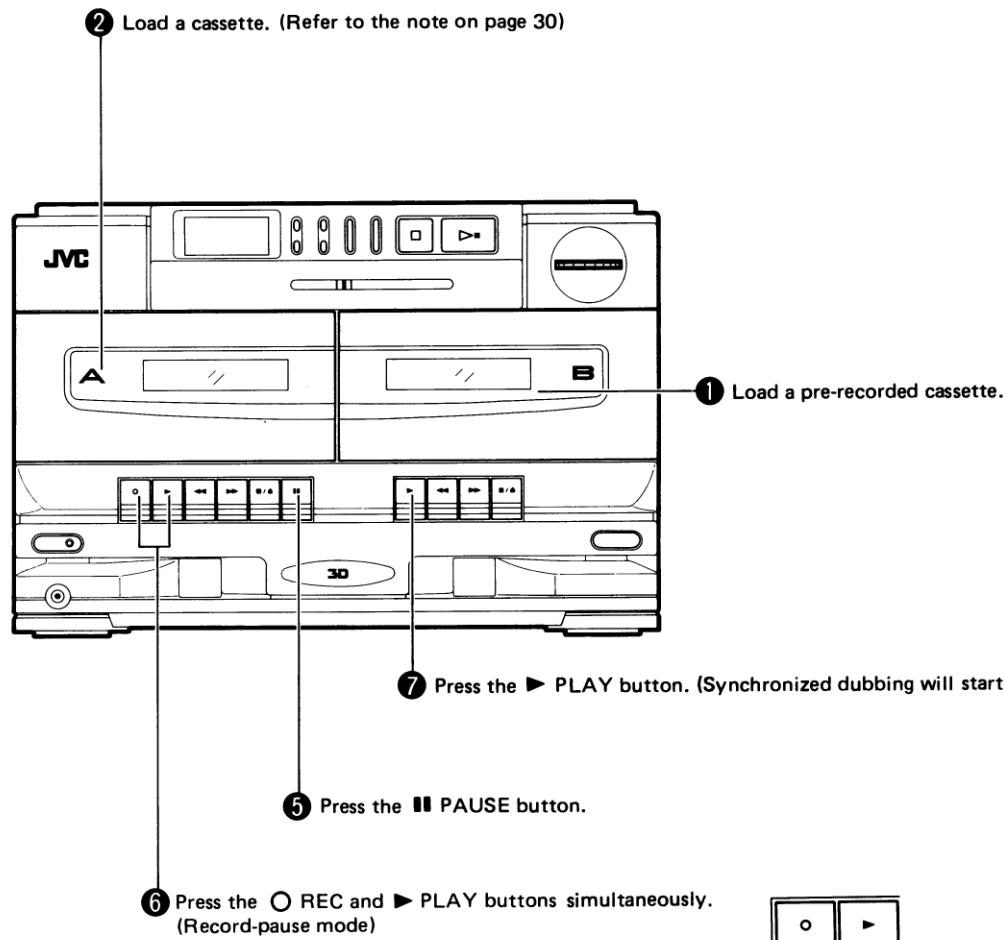


- Load a disc.

## DUBBING (SYNCHRO START DUBBING)

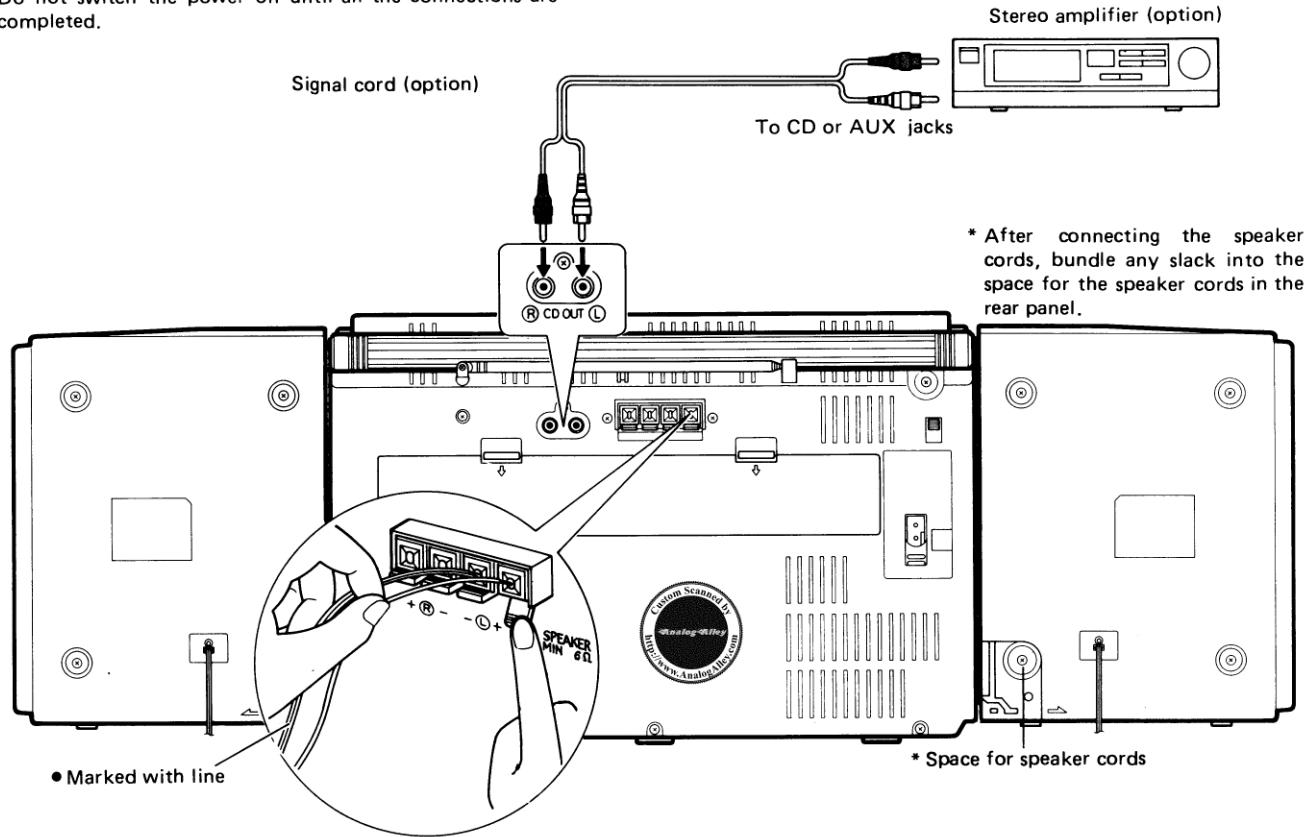
Normal and high-speed dubbing can be done from deck B to deck A.

Operate in order shown.



## CONNECTIONS

- Do not switch the power on until all the connections are completed.

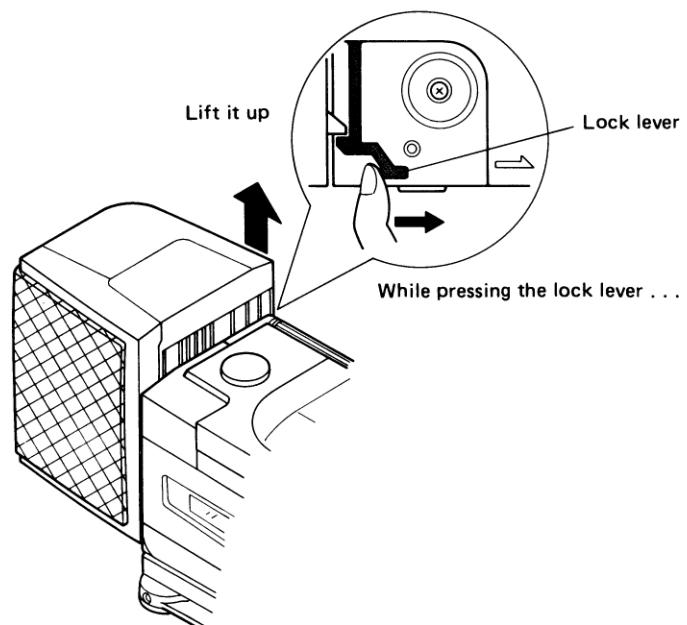
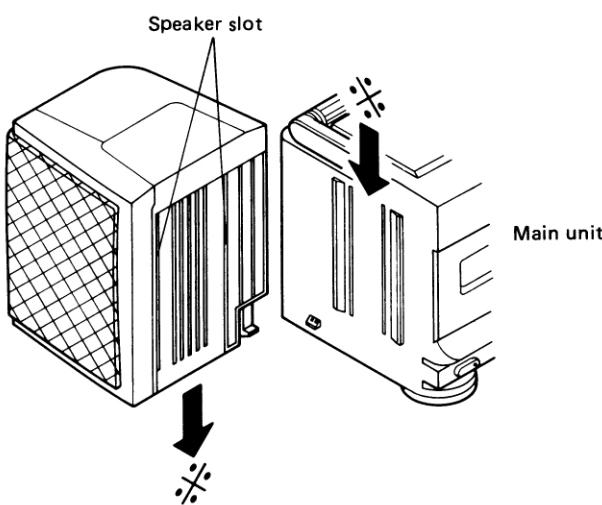


- To listen to a CD using an external stereo amplifier**  
Set the input selector of the stereo amplifier to CD or AUX according to the jacks used for connection.
- To avoid incorrect connection, connect the white plugs of the connection cords to the L (left) channels and the red plugs to the R (right) channels.
- Connect each plug firmly. Loose connection may result in noise.

• When connecting the speaker cords, connect the one marked with a line to the “-” terminal first.

## ATTACHING/DETACHING THE SPEAKERS

**When using the speakers attached to the main unit**  
Hold with the bottom of the speaker against the top of the main unit, and press down on the speaker to attach it.



## 6 Location of Main Parts

### ■ Top view

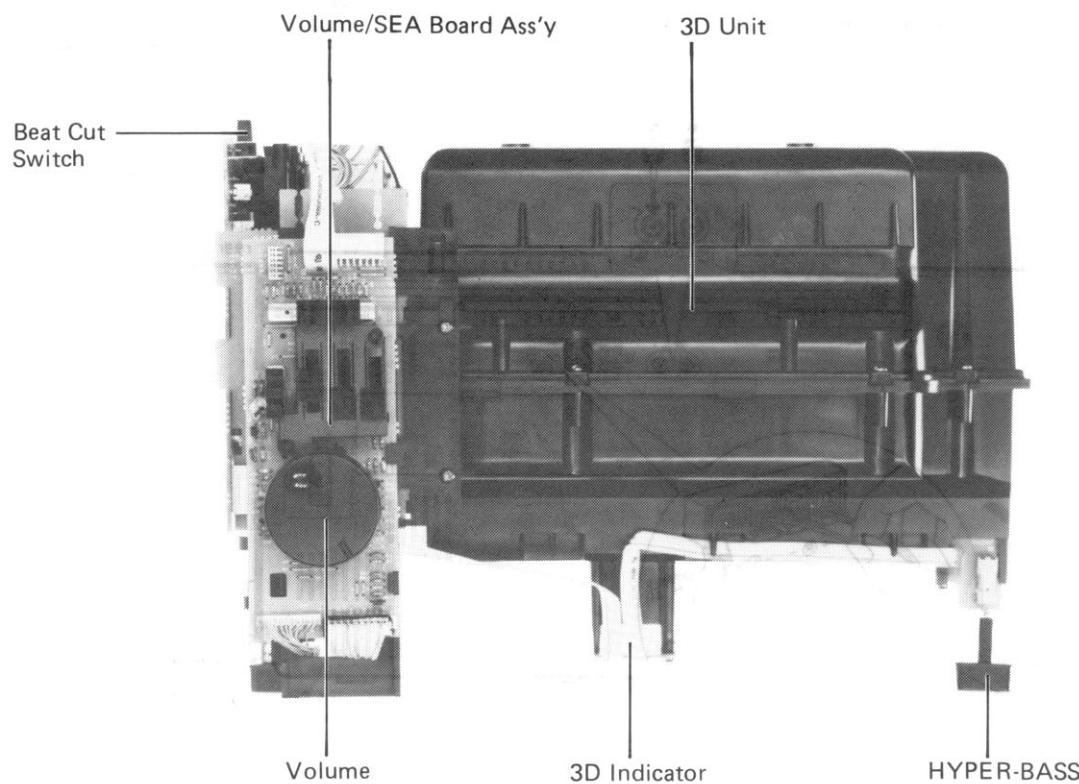


Fig. 6-1

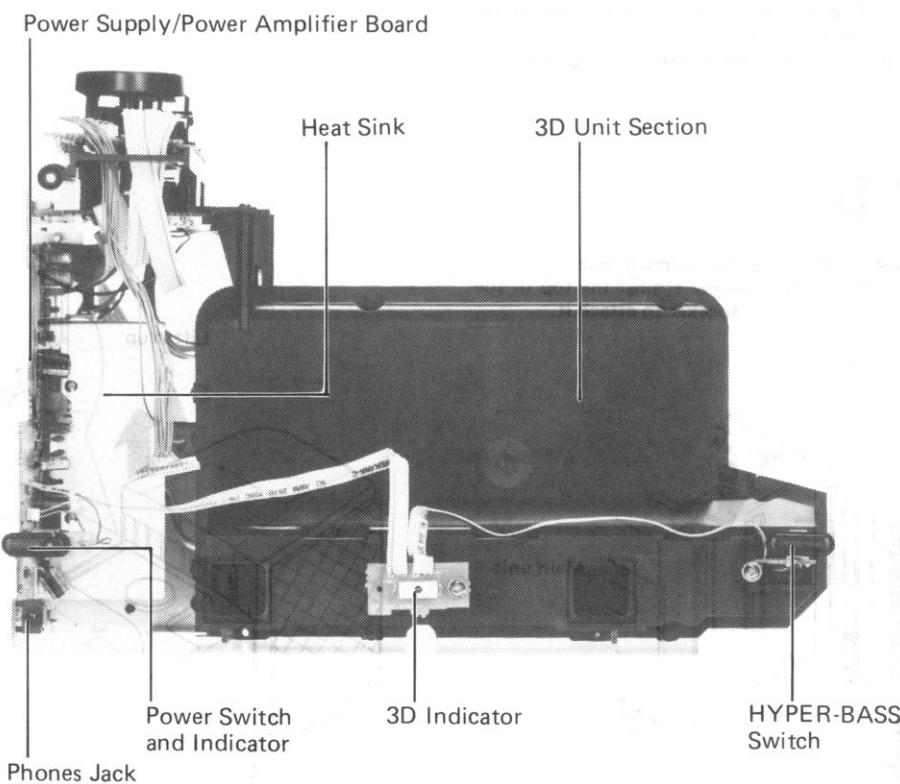


Fig. 6-2

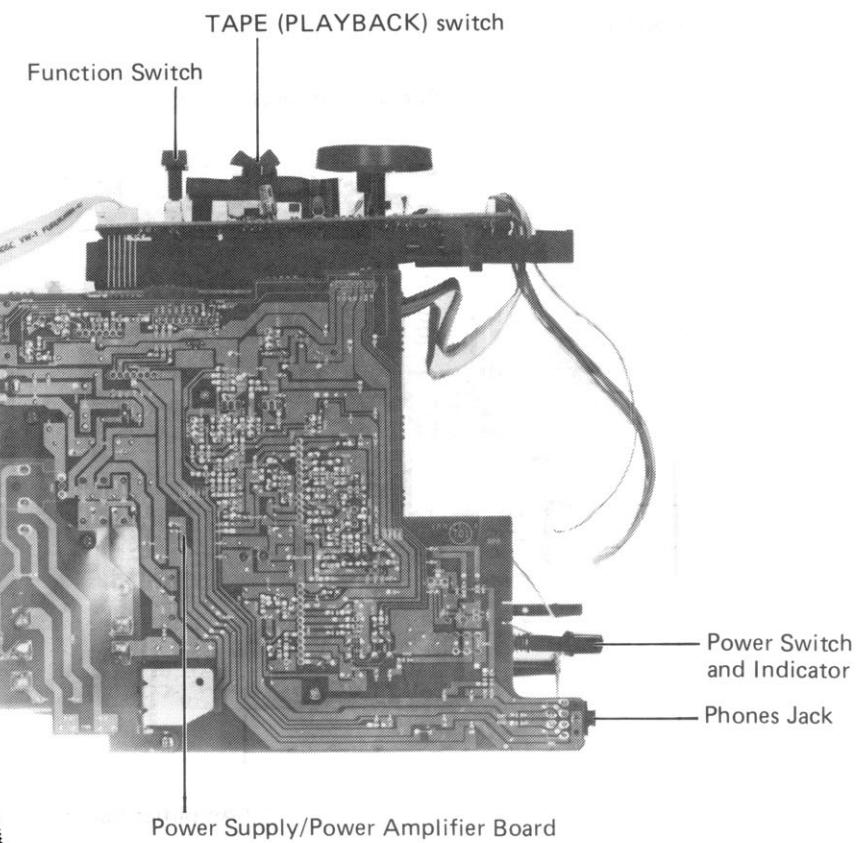


Fig. 6-3

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Analog Alley  
<http://www.AnalogAlley.com>

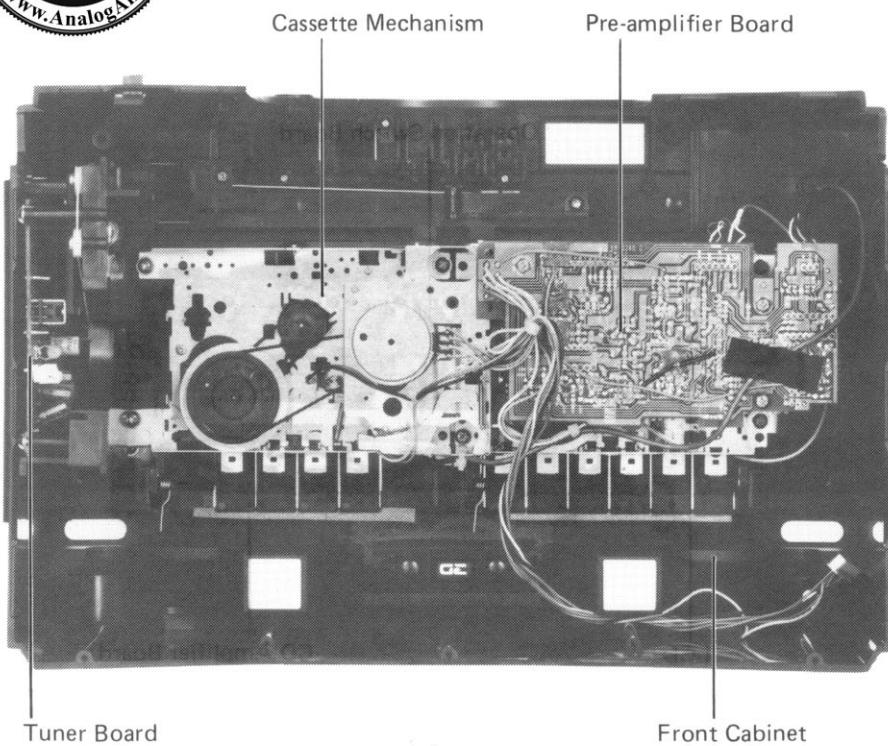


Fig. 6-4

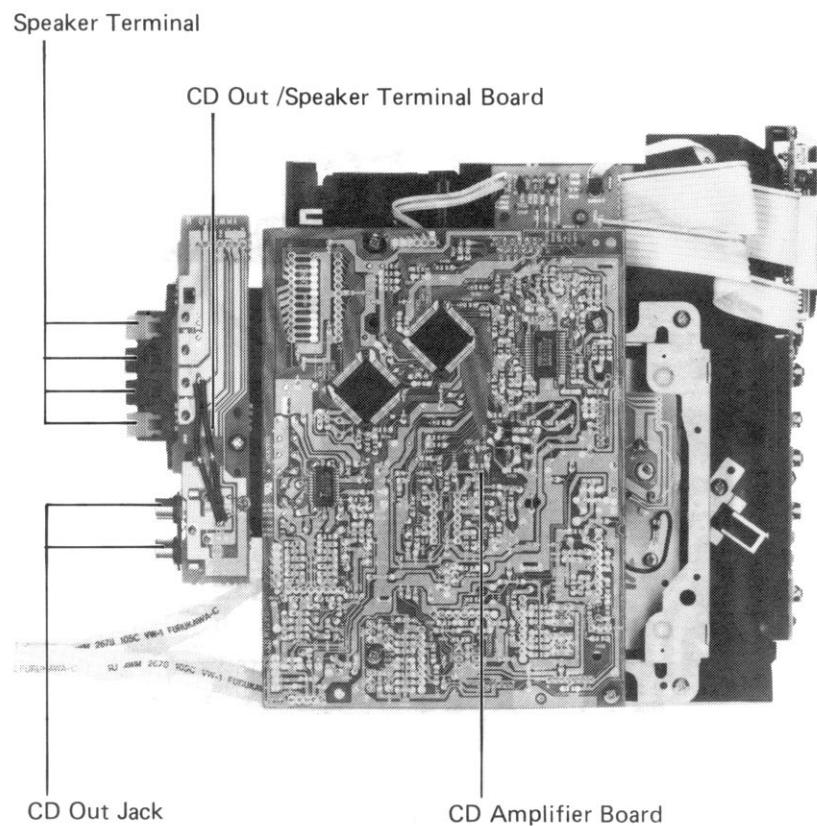


Fig. 6-5

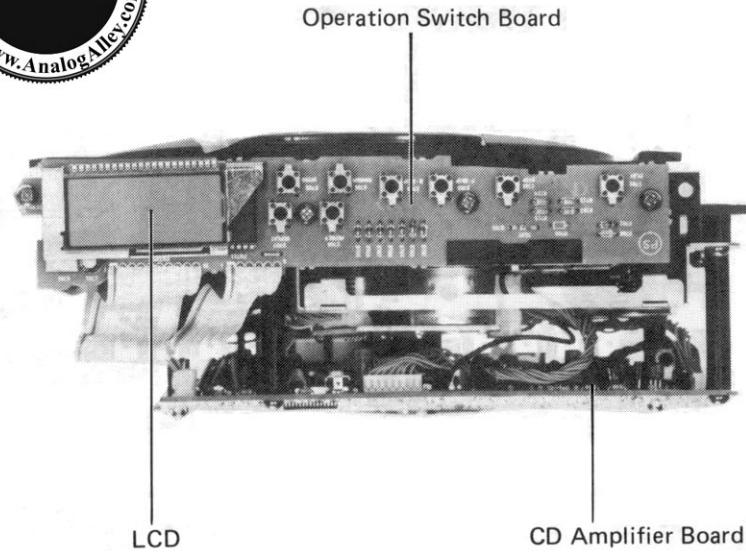


Fig. 6-6

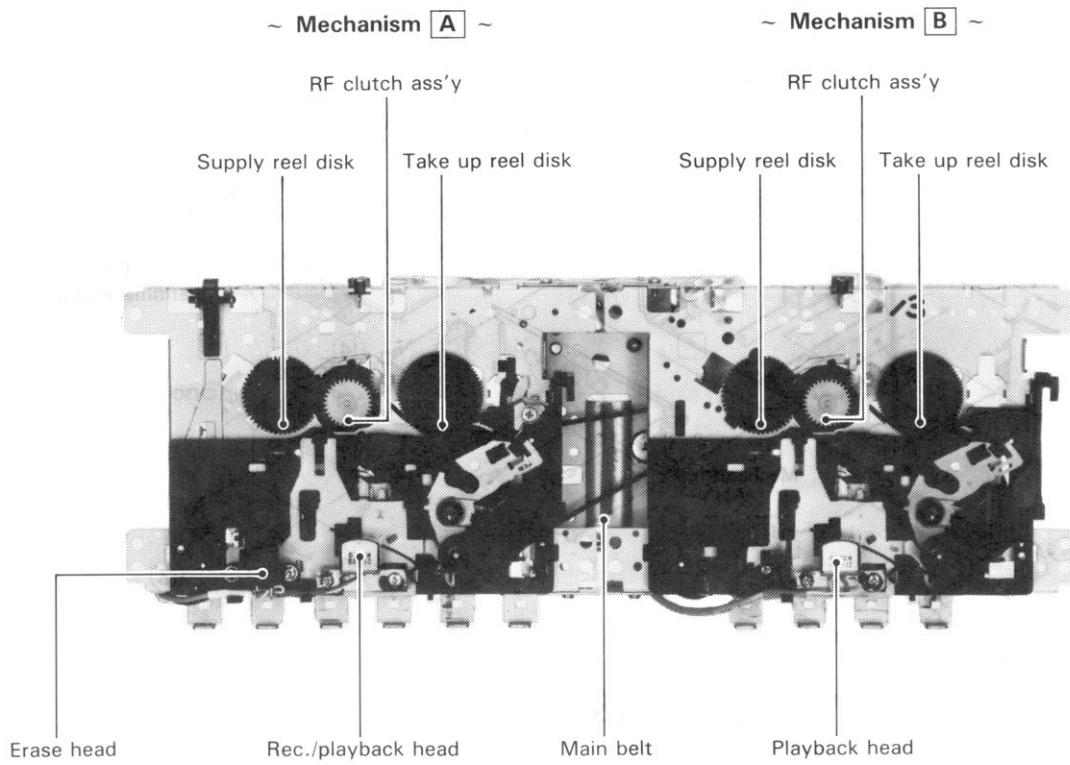


Fig. 6-7

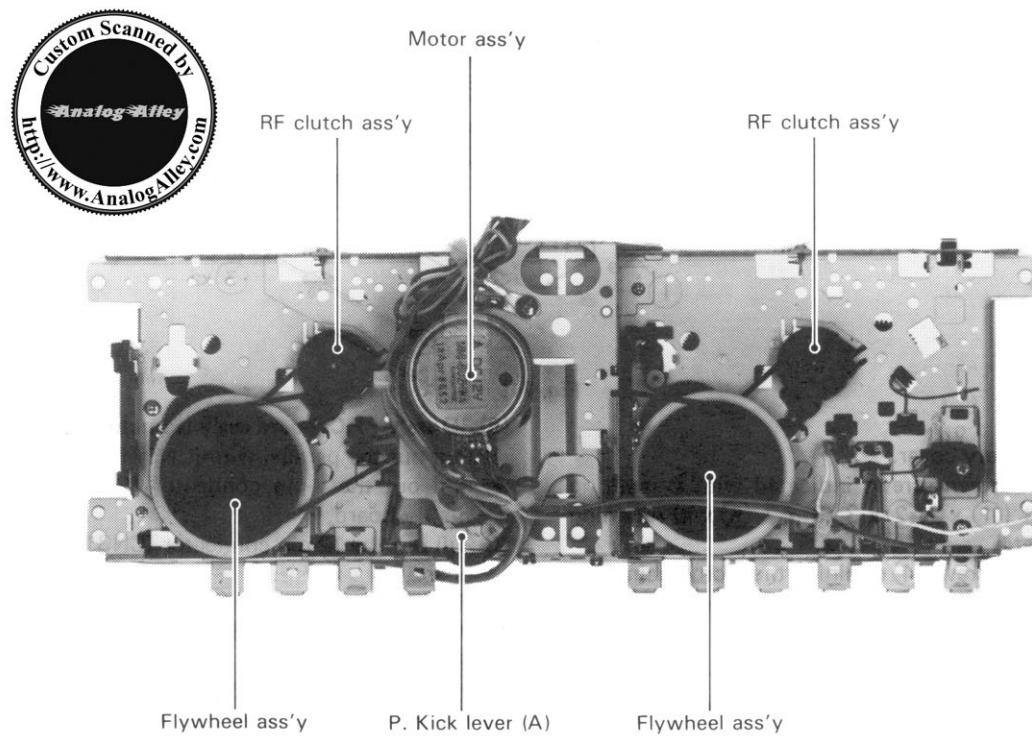


Fig. 6-8

## 7 Removal of Main Parts

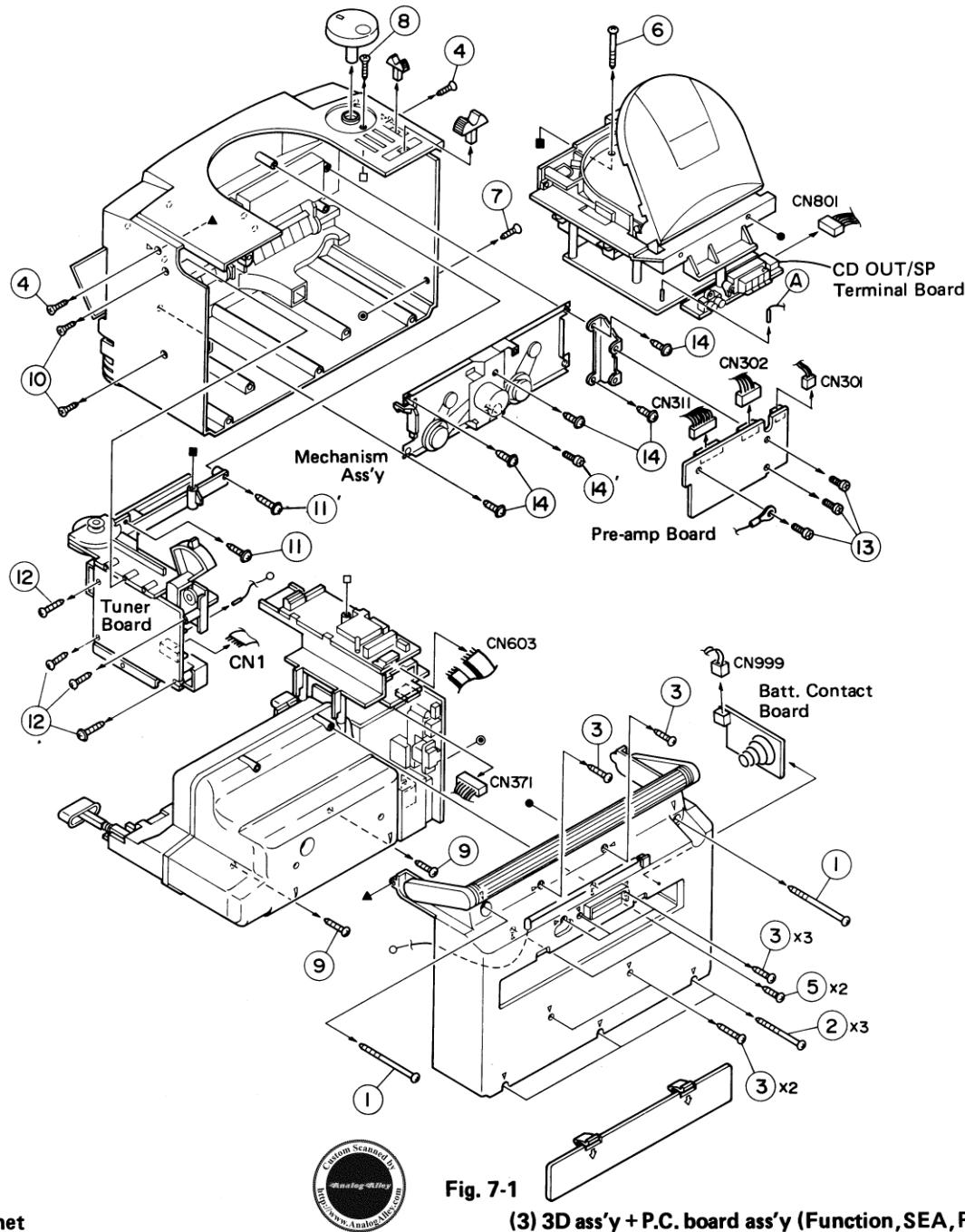


Fig. 7-1

**(1) Rear cabinet**

- 1) Take off the battery cover.
- 2) Remove the fourteen screws indicated with  $\triangle$  marking on the cabinet (① x 2, ② x 3, ③ x 7, ⑤ x 2) retaining the rear cabinet.
- 3) Remove the two screws ④ retaining the front cabinet.
- 4) Take off the antenna wire A from the tuner board.
- 5) Pull the connector CN999.

**(2) CD player section**

- 1) Pull out the 7-pin connector CN801 from the CD OUT/SP jack board.
- 2) Pull out the wire A from the CD amp. board.
- 3) Pull out the two parallel wires (2-pin, 5-pin) from the tape select/function board.
- 4) Open the CD door and remove the one screw ⑥ retaining the tuner chassis.

**(3) 3D ass'y + P.C. board ass'y (Function, SEA, Power Supply)**

- 1) Pull out the parallel wire (CN1) from the tuner board.
- 2) Pull out the 7-pin connector (CN371) from the power supply board.
- 3) Pull out the 12-pin connector (CN311) from the pre-amp board.
- 4) Remove the one screw ⑦.
- 5) Pull out the VOLUME knob and remove the one screw ⑧.
- 6) Pull out the FUNCTION and TAPE switches.
- 7) Remove the two screws ⑨ indicated with  $\triangle$  marking on the 3D cover.

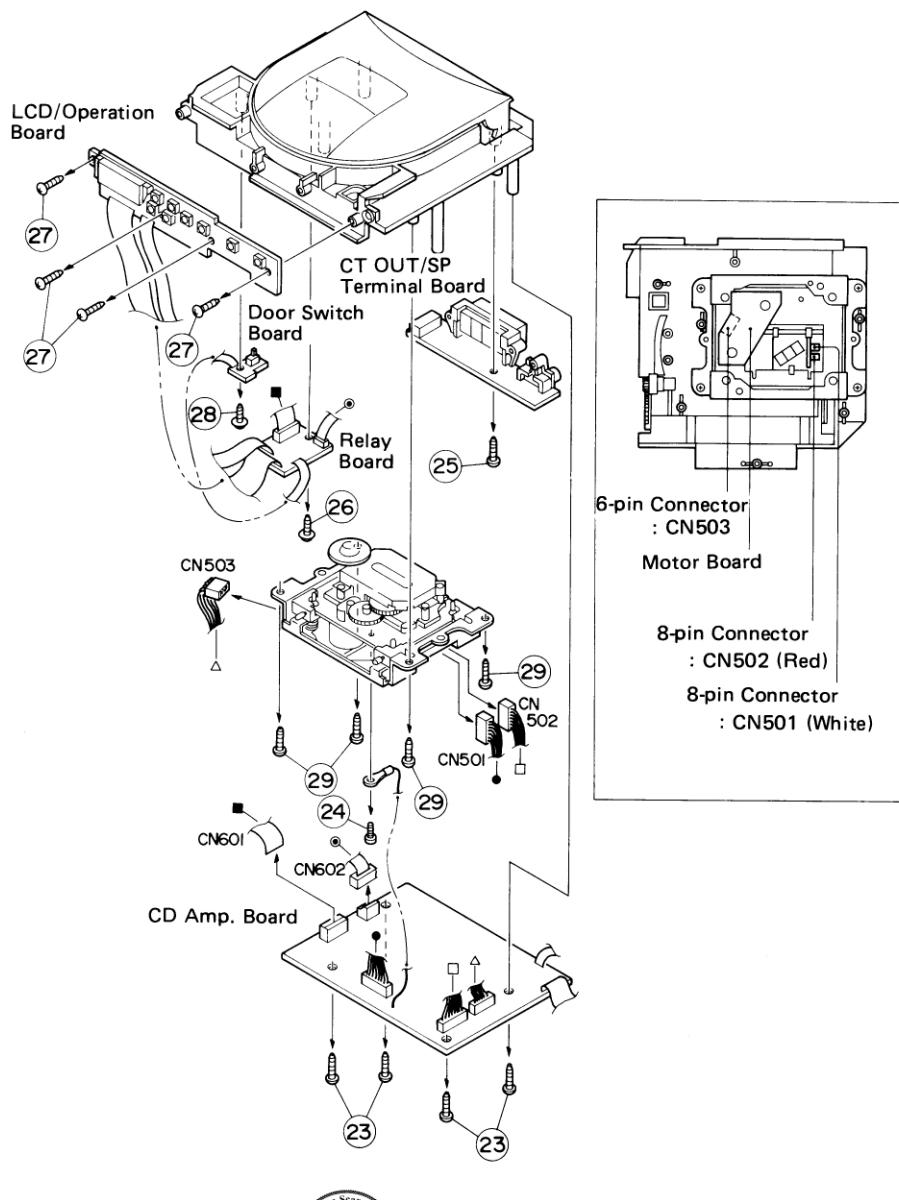


Fig. 7-2

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Analog-Wiley  
http://www.Analog-Wiley.com

#### (4) Tuner board (Fig. 7-1)

- 1) Remove the two screws ⑩ on the front cabinet.
- 2) Remove the two screws ⑪, ⑪' retaining the tuner chassis.
- 3) Remove the four screws ⑫ retaining the tuner board.

#### (5) Mechanism ass'y

- 1) Remove the three screws ⑬ retaining the pre-amp board.
- 2) Pull out the 3-pin connector (CN301) and the 7-pin connector (CN302) from the pre-amp board.
- 3) Open the cassette door and remove the six screws ⑭, ⑭'.

#### (6) CD mechanism ass'y

- 1) Remove the four screws ⑯ retaining the CD amp. board.

- 2) Pull out the two 8-pin connectors (CN501, CN502) from the CD mechanism ass'y.
- 3) Pull out the 6-pin connector (CN503) from the CD motor board.
- 4) Remove the one screw ⑭.
- 5) Pull out the parallel wires (CN601) and 3-pin connector (CN602) from the CD board.
- 6) Remove the one screw ⑮ retaining the CD OUT/SP terminal board.
- 7) Remove one screw ⑯ retaining the relay board.
- 8) Remove the four screws ⑰ retaining the LCD/operation board.
- 9) Remove the one screw ⑱ retaining the door switch board.
- 10) Remove the four screws ⑲ retaining the mechanism ass'y.

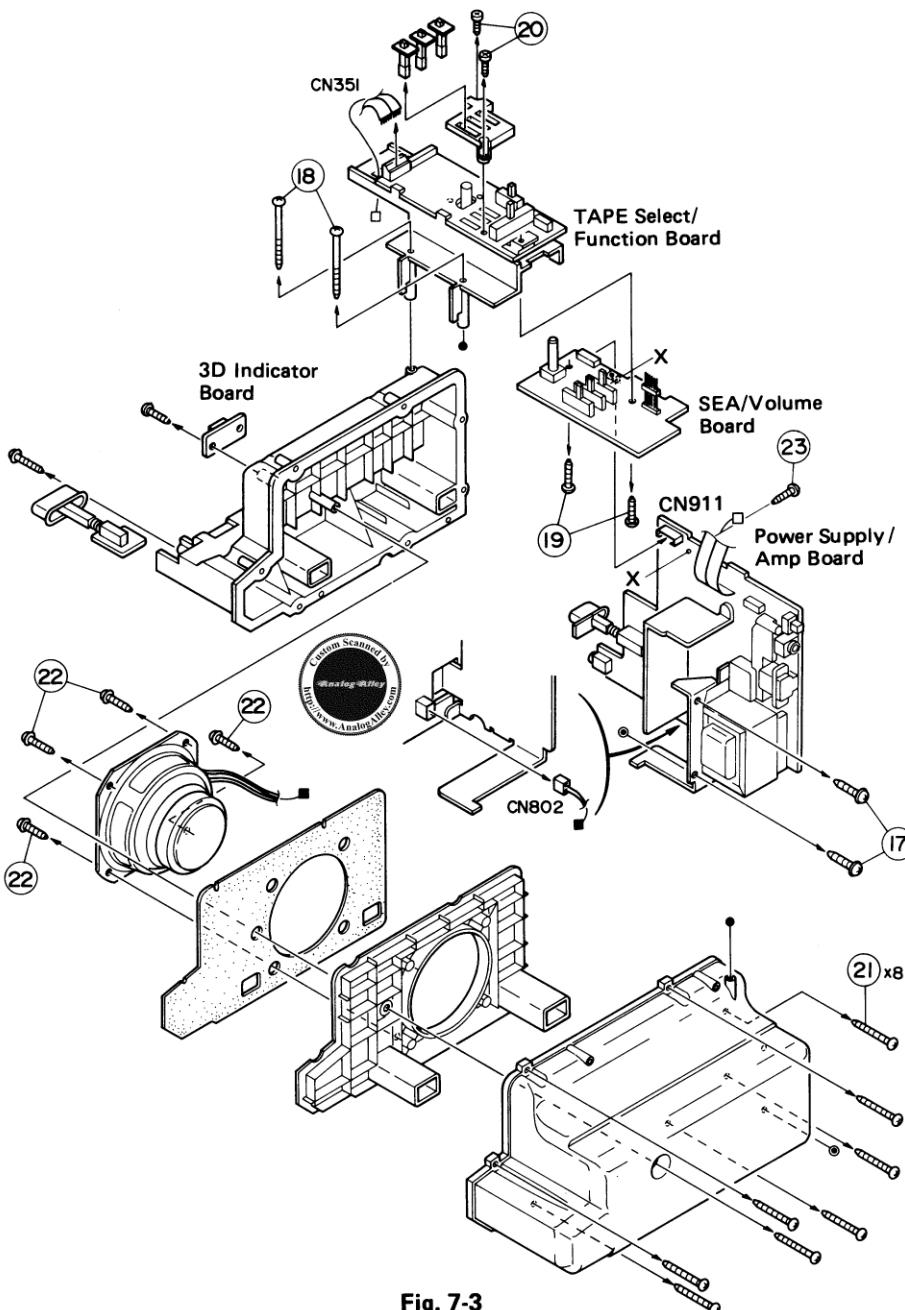


Fig. 7-3

**(7) Power supply/Amp.board, SEA/Volume board and TAPe select/Function board**

- 1) Remove the two screws ⑯ retaining the chassis to the 3D cover.
- 2) Remove the two screws ⑰ retaining the transformer bracket to the 3D cover.
- 3) Pull out the 2-pin connector (CN802) from the Power supply/Amp. board.
- 4) Pull out the three SEA knobs.
- 5) Pull out the parallel wires (9-pin: CN351) from the TAPe select/Function board.

6) Remove the screw ㉓ retaining the Power supply/Amp. board, and remove the connector CN901 from the connector CN911.

- 7) Remove the two screws ⑲ separating the TAPe select/Function board from the SEA/Volume board.
- 8) Remove the three screws ㉐ retaining the TAPe select/Function board to the chassis.

**(8) 3D speaker**

- 1) Remove the eight screws ㉑ to separate the 3D base from the 3D cover.
- 2) Remove the four screws ㉒ retaining the speaker.

## ■ Cassette Mechanism Sections

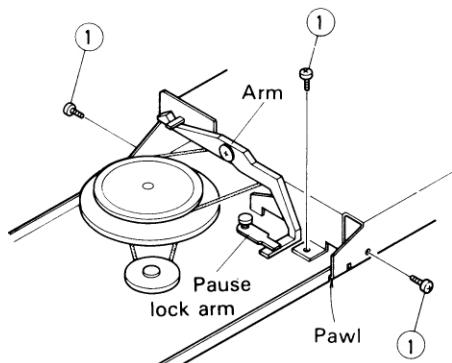


Fig. 7-4

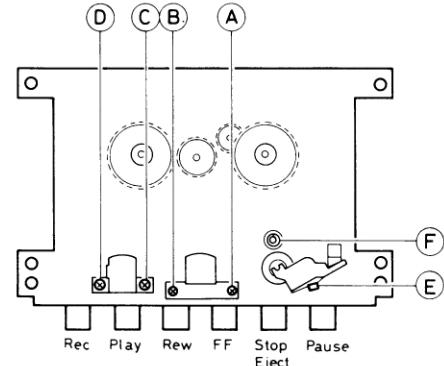


Fig. 7-5

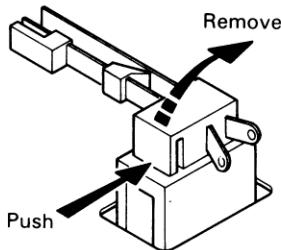


Fig. 7-6

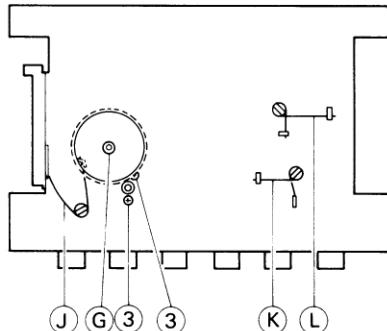


Fig. 7-8

### ■ Motor bracket (Recording/playback deck)

- 1) Remove the three screws (1).
- 2) Remove the chassis and M. bracket from the button side. Then remove the bracket arm (panel). (The synchro arm can be removed from the pause lock. Return the pause lock after it is removed from the proper position.)

### ■ Head section

- 1) Remove the record/playback head's mounting screw (A) and loosen screw (B).
- 2) Remove the erase head mounting screw (C) and (D).

### ■ Pinch roller

- 1) Remove the pinch roller arm stopper (E).

### ■ Flywheel ass'y

- 1) Remove the C washer (F) securing the capstan shaft.
- 2) Pull out the flywheel ass'y.

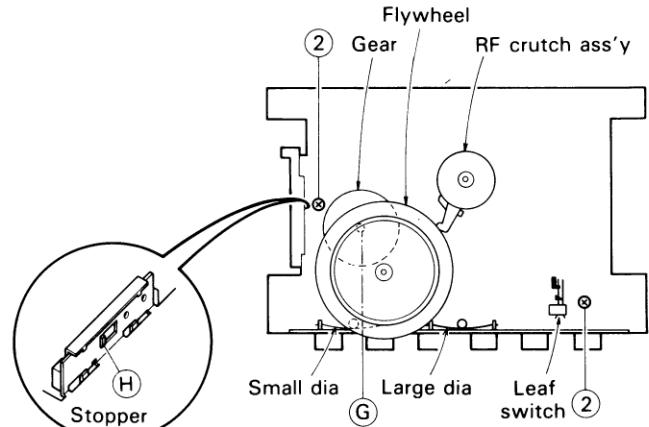


Fig. 7-7

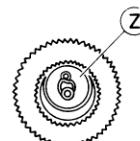


Fig. 7-9

### ■ Removal of the button ass'y from the mechanical chassis.

- Leaf switch  
Press the switch's lock panel and raise from the left to remove.
- Gear (Below the flywheel)  
Remove the C washer (G) securing the gear. For reassembly, insert the Sensing Lever arm stand into the (Z) section.
- Lock arm  
Press the arm stopper from window (H), and pull to remove.
- Chassis removal
  - 1) Remove the three (J), (K), and (L) springs.
  - 2) Remove the two screws (2).
  - 3) Remove the two screws (3) securing the capstan metal.
  - 4) Gently remove the button ass'y from the chassis.

# 8 Main Adjustments

## ■ Equipment and Measuring Instruments used for Adjustments

Electronic voltmeter  
Audio frequency oscillator  
Attenuator

Wow-flutter meter  
Frequency counter  
Standard signal generator

Torque testing cassette gauge CTG-N  
Alignment tape  
measuring tape : TS-8 (UR)

## ■ Condition for Measurement

Power supply ..... AC 120 V (50/60 Hz) ....PC-X500C  
AC 110-120/220-240 V...PC-X500J  
DC 12 V  
Reference output .... Speaker : 0 dBs (0.775 V)/3 Ω  
Woofer : L, R 4 Ω  
Headphone : 0 dB (0.775 V)/32 Ω  
Reference position... Function : TAPE  
of switch      Tape select: NORMAL  
                  Beat cut : NORMAL 1  
                  Dubbing speed select  
                  : NORMAL SPEED  
Mode : STEREO  
Noise reduction: OFF

Reference position... Volume : Adjust to 0 dBs output  
of volume      SEA : Center  
Reference input..... MIX MIC : – 50 dBs  
level            (When using the MIX MICROPHONE,  
                  set Deck B to PLAY position and set  
                  the TAPE SELECT to NORMAL posi-  
tion.)  
CD output: at – 8 dBs  
(Use the CD OUTPUT terminal as an  
Input Terminal. When in use, remove  
the disc and put the function switch  
in CD position.)  
Measuring output.... Speaker terminal  
terminal

## ■ Amplifier Section

Item	Measuring Conditions and Main Adjustments	Standard Value	Adjusting Point								
Playback output level adjustment	<p>&lt;Conditions&gt;</p> <p>1. Measuring tape: VTT724 (1 kHz) 2. Measuring point: TP (CN311 Connector)</p> <p>&lt;Adjustment&gt;</p> <p>1. Playback the test tape VTT724 (at 1 kHz) and adjust Lch: VR101 and Rch: VR102 of deck A so that output of TP (CN311 connector) becomes –21 dB. Also adjust Lch: VR201 and Rch: VR202 of Deck B same as Deck A.</p>	– 21 dB ±1 dB	Deck A Lch: VR101 Rch: VR102 Deck B Lch: VR201 Rch: VR202								
Playback frequency response confirmation	<p>&lt;Conditions&gt;</p> <p>1. Measuring tape: VTT736 2. Measuring point: TP (CN311 connector)</p> <p>&lt;Confirmation&gt;</p> <p>1. Playback the test tape VTT736 difference level against 1 kHz.            1 kHz/63 Hz : less than –1±4 dB            1 kHz/12.5 kHz : less than 0±4 dB</p> <p>2. When comparing the difference level of the NORMAL and METAL positions, the METAL one should be as follows:            12.5 kHz: less than –4±2 dB</p>	Normal position 1 kHz/63 Hz : less than –1±4 dB 1 kHz/12.5 kHz : less than 0±4 dB	—								
Bias frequency adjustment	<p>&lt;Conditions&gt;</p> <p>1. Measuring point: Speaker terminal 2. Mode: REC/PAUSE</p> <p>&lt;Adjustment&gt;</p> <p>Adjust L301 so that standard value is 68±0.5 kHz while in RECORD/PAUSE mode.</p>	<table border="1"> <tr> <th>Beat Cut Switch</th> <th>Bias frequency</th> </tr> <tr> <td>1 (Normal)</td> <td>68±0.5 kHz</td> </tr> <tr> <td>2</td> <td>67.1±1 kHz</td> </tr> <tr> <td>3</td> <td>69.5 kHz</td> </tr> </table>	Beat Cut Switch	Bias frequency	1 (Normal)	68±0.5 kHz	2	67.1±1 kHz	3	69.5 kHz	L301
Beat Cut Switch	Bias frequency										
1 (Normal)	68±0.5 kHz										
2	67.1±1 kHz										
3	69.5 kHz										

Item	Measuring Conditions and Main Adjustments	Standard Value	Adjusting Point
Head azimuth adjustment	<p>&lt;Conditions&gt;</p> <ol style="list-style-type: none"> <li>1. measuring tape: VTT702 (8 kHz)</li> <li>2. Measuring Point: Speaker terminal</li> </ol> <p>&lt;Adjustment&gt;</p> <ol style="list-style-type: none"> <li>1. Playback VTT702 on both deck A and B, adjust Azimuth screw as in figure so that phase difference becomes smallest within 1 dB from peak point.</li> <li>2. Adjust Forward and Reverse of Deck B by Azimuth head screw on tape's running direction side.</li> <li>3. The screws must be bonded on after adjustment. (one location on Deck A, two locations on Deck B)</li> </ol>	Within 1 dB from peak point.	<p>Deck A</p> <p><b>Fig. 9-1</b></p> <p>Deck B</p> <p><b>Fig. 9-2</b></p>
Tape speed and wow-flutter adjustment and confirmation	<p>&lt;Conditions&gt;</p> <ol style="list-style-type: none"> <li>1. Measuring tape: VTT712 (3 kHz)</li> <li>2. Measuring point: Speaker terminal</li> </ol> <p>&lt;Adjustment &amp; Confirmation&gt;</p> <ol style="list-style-type: none"> <li>1. Playback the test tape VTT712 at tape end.</li> <li>2. Deck B <ul style="list-style-type: none"> <li>:Adjust semifixed resistor VR301 in the motor so that tape speed is within 2990 ~ 3010 Hz at normal speed.</li> <li>Deck A <ul style="list-style-type: none"> <li>:After adjustment Deck A and B should be from 2950 ~ 3100 Hz.</li> </ul> </li> </ul> </li> <li>3. Should be from 5100 ~ 5700 Hz when hi-speed dubbing.</li> <li>4. Check to see if reading of the meter is less than 0.38% (JIS - RMS).</li> </ol>	<p>Tape speed NORMAL 2990 ~ 3010 Hz High 5100 ~ 5700 Hz</p> <p>Wow-flutter less than 0.38% (JIS RMS)</p>	<p>Tape speed</p> <p>VR301</p>
REC/Playback sensitivity adjustment	<p>&lt;Conditions&gt;</p> <ol style="list-style-type: none"> <li>1. Measuring input: CD out</li> <li>2. Measuring point: Speaker terminal</li> </ol> <p>&lt;Adjustment&gt;</p> <p>First input 1 kHz (REF - 5 dBs) signal into CD OUT. When recording this signal onto the tape and playing it back, adjust Lch: VR103 and Rch: VR203 of Deck B so that the output level is <math>1 \pm 1</math> dB.</p>	REC/Playback sensitivity $1 \pm 1$ dB	<p>Deck B</p> <p>: Lch VR103 Rch VR203</p>
REC/Playback frequency characteristics adjustment	<p>&lt;Conditions&gt;</p> <ol style="list-style-type: none"> <li>1. Measuring input: CD out</li> <li>2. Measuring point: DOLBY T.P.</li> </ol> <p>&lt;Adjustment&gt;</p> <p>First input 1 kHz (REF - 20 dB) signal into CD OUT. When recording this signal onto the tape and playing it back, adjust Lch: VR104 and Rch: VR204 so that the output level is <math>0 \pm 1</math> dB at the 12.5 kHz point.</p>	$0 \pm 1$ dB at 12.5 kHz point	<p>Lch : VR104 Rch : VR204</p>

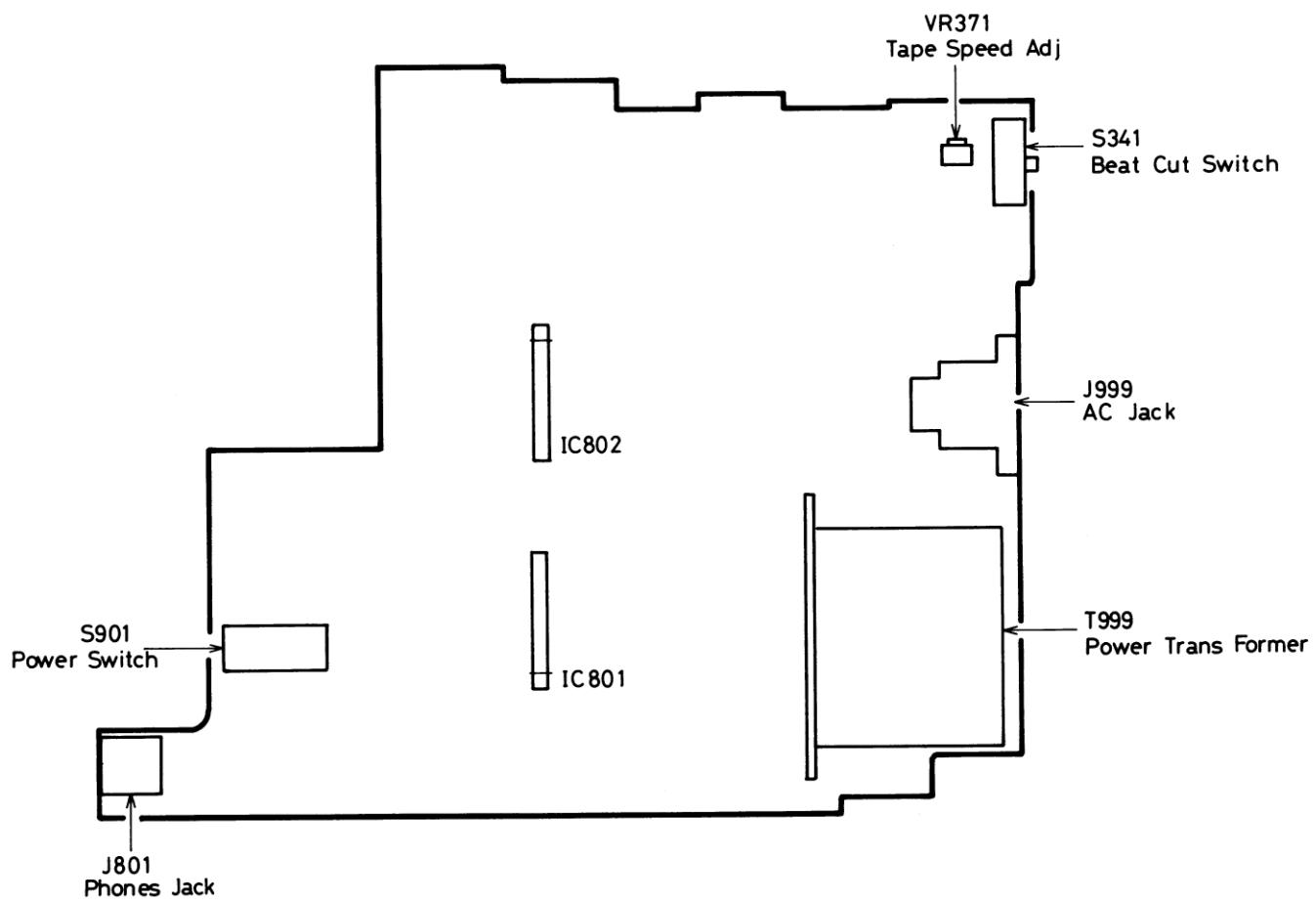


Fig. 8-1

■ Location of Adjustments: Tuner Section

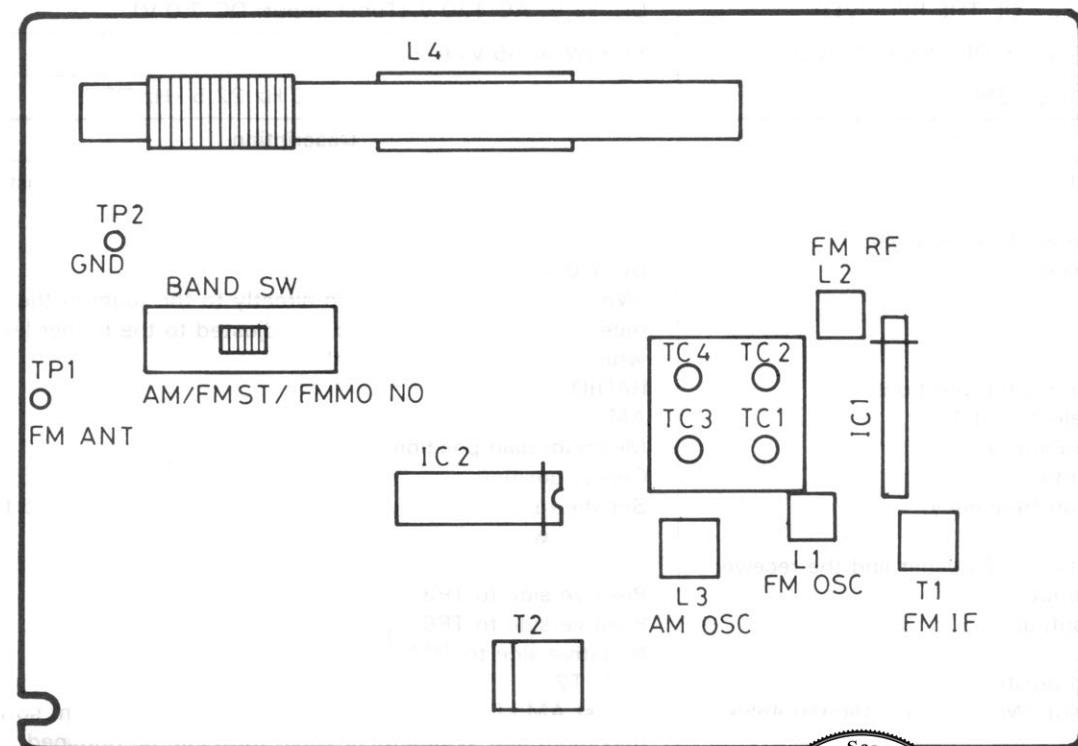


Fig. 8-2

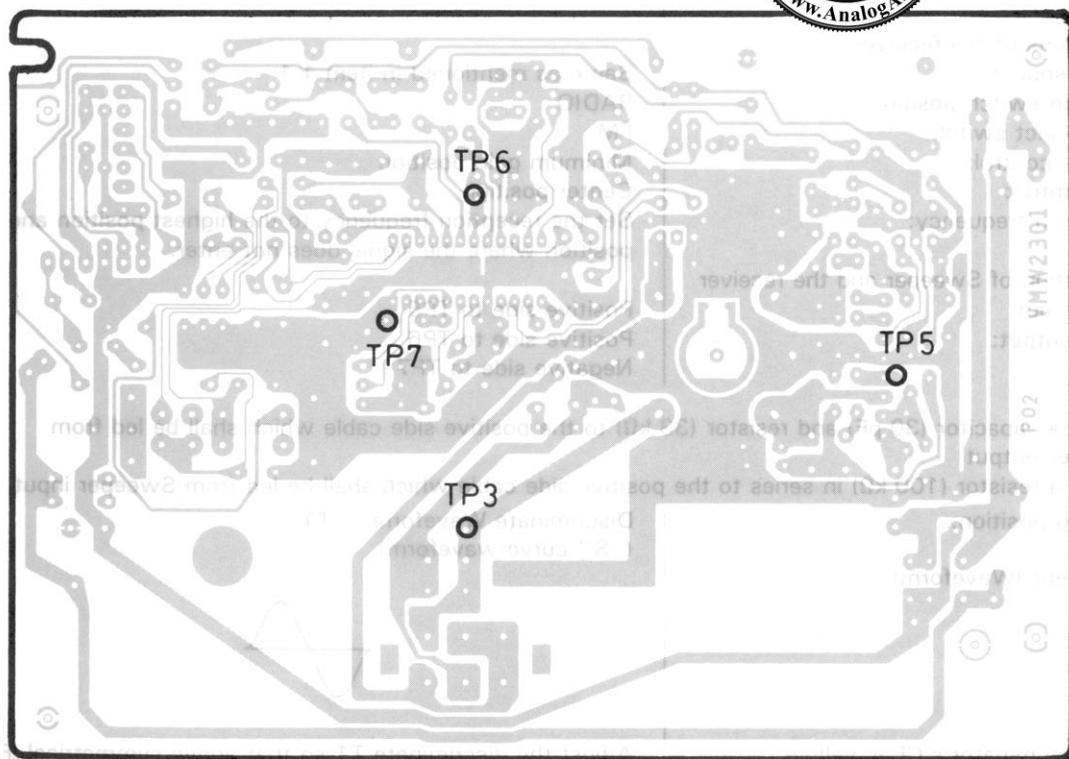


Fig. 8-3

## ■ Tuner Alignment

### BASIC CONDITIONS

POWER SOURCE OF THE RECEIVER	DC 12 V, AC 120 V (Tuner input: DC 7.0 V)
LOAD RESISTANCE OF THE RECEIVER	50 mW (0.55 V)/6 Ω
MODULATION OF SSG	AM: 400 Hz. 30% FM: 400 Hz 22.5 kHz DEV:
Item	Description
<b>1. AM IF ALIGNMENT (The unit should not usually require adjustment. Follow the steps below when adjustments are necessary).</b>	
1-1 Conditions of the receiver.	
(1) Power source:	DC 7.0 V (When the power is supplied directly to the tuner in the receiver, the voltage should be adjusted to the proper level which shall be required by the tuner.)
(2) Function switch position:	RADIO
(3) Band select switch:	AM
(4) Volume control:	Minimum gain position
(5) SEA control:	Center position
(6) Reception frequency:	Set the reception frequency to the highest position and to the position where the signal does not enter.
1-2 Connection of Sweeper and the receiver	
(1) Tuner input:	Positive side to TP3
(2) Tuner output:	Positive side to TP6 ] Negative side to TP7
1-3 Aligning position:	CFT, T2
1-4 Alignment (Waveform): 450 kHz(455 kHz)	Adjust AM I.F.T. (above mentioned aligning position) so that maximum and symmetrical wave form can be obtained. In this case, the wavehead should be appeared at the center marker (450 kHz) on the scope of Sweeper.
<b>2. FM IF ALIGNMENT (The unit should not usually require adjustment. Follow the steps below when adjustments are necessary).</b>	
2-1 Conditions of the receiver	
(1) Power source:	Same as mentioned in item 1-1
(2) Function switch position:	RADIO
(3) Band select switch:	FM
(4) Volume control:	Minimum gain position
(5) SEA control:	Center position
(6) Reception frequency:	Set the reception frequency to the highest position and to the position where the signal does not enter.
2-2 Connection of Sweeper and the receiver	
(1) Tuner input:	Positive side to TP5
(2) Tuner output:	Positive side to TP6 Negative side to TP7
<b>NOTE</b>	
a) Attach a capacitor (30 pF) and resistor (33 kΩ) to the positive side cable which shall be led from Sweeper output.	
b) Attach a resistor (100 kΩ) in series to the positive side cable which shall be led from Sweeper input.	
2-3 Aligning position:	Discriminate Waveform: T1 (‘S’ curve waveform)
2-4 Alignment (Waveform):	
<b>NOTE</b>	
The discriminator's CF is yellow. Do not use one that is of another color.	Adjust the discriminate T1 so that above symmetrical IF waveform may be changed to balanced ‘S’ curve waveform.

Item		Description					
<b>3. AM RF ALIGNMENT</b>							
3-1 Conditions of the receiver.		Same as mentioned in item 1-1. RADIO 50 mW Center position					
(1) Power source: (2) Function switch position: (3) Volume control: (4) SEA control: (5) Variable capacitor:		Refer the following list shown in item 3-4.					
3-2 Conditions of SSG.		Refer the basic condition					
(1) Modulation: (2) Frequency: (3) Output level of the attenuator in SSG:		Refer the following list shown in item 3-4. Approx. 50 mW					
3-3 Output measuring position:		Speaker terminals					
3-4 Alignment:							
Step	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position			
1	AM	Loop Antenna	520 kHz	Maximum Capacitor			
2			1750 kHz	Minimum Capacitor			
3			Repeat 1, 2				
4			600 kHz	to be received 600 kHz (M2)			
5			1,500 kHz	to be received 1,500 kHz (M4)			
6			Adjust the above aligning position (L4 & TC4) repeatedly so that the tuner can be obtained the best sensitivity.				
Item		Description					
<b>4. FM RF ALIGNMENT</b>							
4-1 Conditions of the receiver.		Same as mentioned in item 1-1. RADIO FM 50 mW Center position					
(1) Power source: (2) Function switch position: (3) Band select switch: (4) Volume control: (5) SEA control: (6) Reception frequency:		Refer the following list shown in item 4-4.					
4-2 Condition of FM SSG.		Refer the basic condition					
(1) Modulation: (2) Frequency:		Refer the following list shown in item 4-4.					
4-3 Connection of sweeper and the receiver.							
(1) Tuner input		Positive side to TP1. Negative side to TP2.					
(2) Output measuring position		Speaker Terminal					
4-4 Alignment:							
Step	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position			
1	FM	75 Ω Unbalanced	87.5 MHz	Maximum Capacitor			
2			109 MHz	Minimum Capacitor			
3			Repeat 1, 2.				
4			90 MHz	to be received 90 MHz			
5			106 MHz	to be received 106 MHz			
6			Adjust the above aligning position (L2 & TC-2) repeatedly so that the tuner can be obtained the best sensitivity.				
	FM MPX	"	Non adjustment: Confirm that the movement and separation are correct.				

## ■ CD Changer Adjustment

### • State of CD unit

The term "State of CD Unit" refers to the state in which the CD mechanism and CD amplifier board (VMW1220) are assembled. Accordingly, maintenance and other service operations are performed in a "State of CD Unit".

- (1) When using the DC stabilization power source, connect FW702's terminals ⑥, ⑦ and ⑩ and ground them, then impress 9.1 V on terminal ⑧. Shortcircuiting FW701's terminals ⑤ and ⑥ will enable operation by remote control.
- (2) The audio output's load resistance is 47 kΩ. Also, inputting into AUX IN will enable monitoring.

### • Tracking offset adjustment

**Adjustment tools:** Oscilloscope, normal disc

#### Adjustment procedures:

- (1) Connect the oscilloscope to the hot side TP503, and the earth side TP502 to the earth side.
- (2) Playback the normal disc and confirm that tracking error signals are generated.
- (3) As TP504 and TP502 stop 3 seconds after being short-circuited, and start the test mode (at this time, all LCDs will light) so that it will not stop, and so that adjustment can be easily made. Make sure to turn on the power after completed adjustment.

**Note:** Adjust VR501 so that the waveform will be symmetrical both above and below with respect to the zero level, and give DC coupling to the oscilloscope input.

### • On the semi-fixed resistor equipped on the auto power control board

The semi-fixed resistor equipped on the auto power control board and fitted on the pickup is for laser power adjustment. This adjustment is for pair adjustment in conformance with the optical block's characteristics, so remember never to touch this semi-fixed resistor.

If the laser beam's power is low, this is conceivably due to the laser diode's life runout, so the pickup will have to be replaced. Remember that turning the semi-fixed resistor of a normal pickup will cause an overcurrent to damage the pickup.

### • Grating Adjustment

Grating adjustment is performed in units of components to attain their optimum states. Improper adjustment will cause the laser beams to go off-track any may render musical performance impossible.

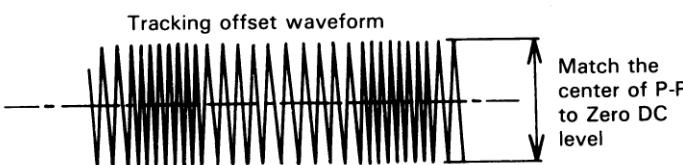
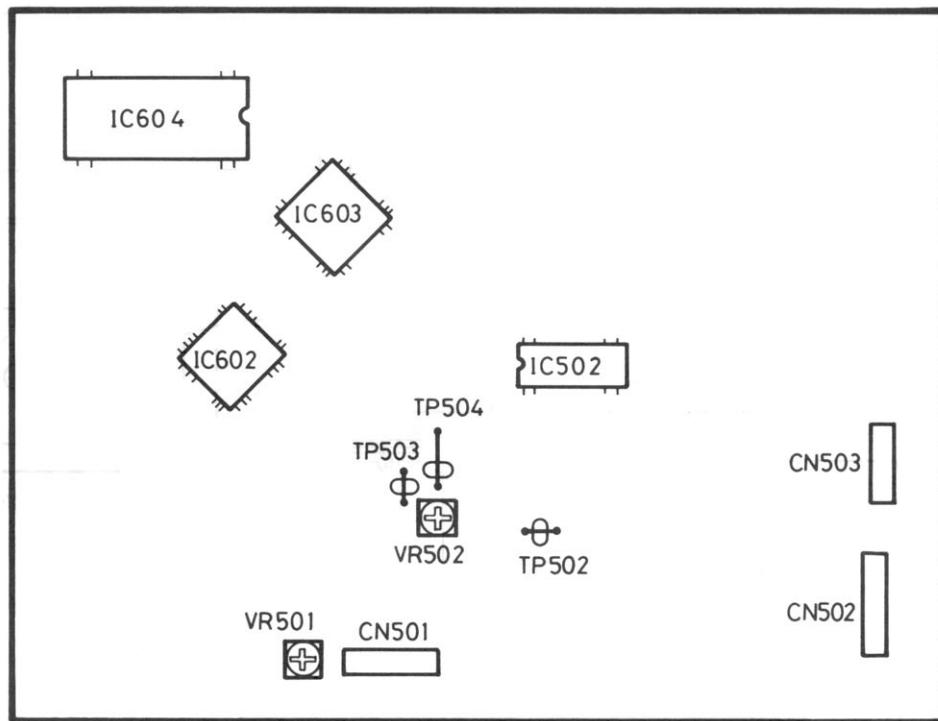
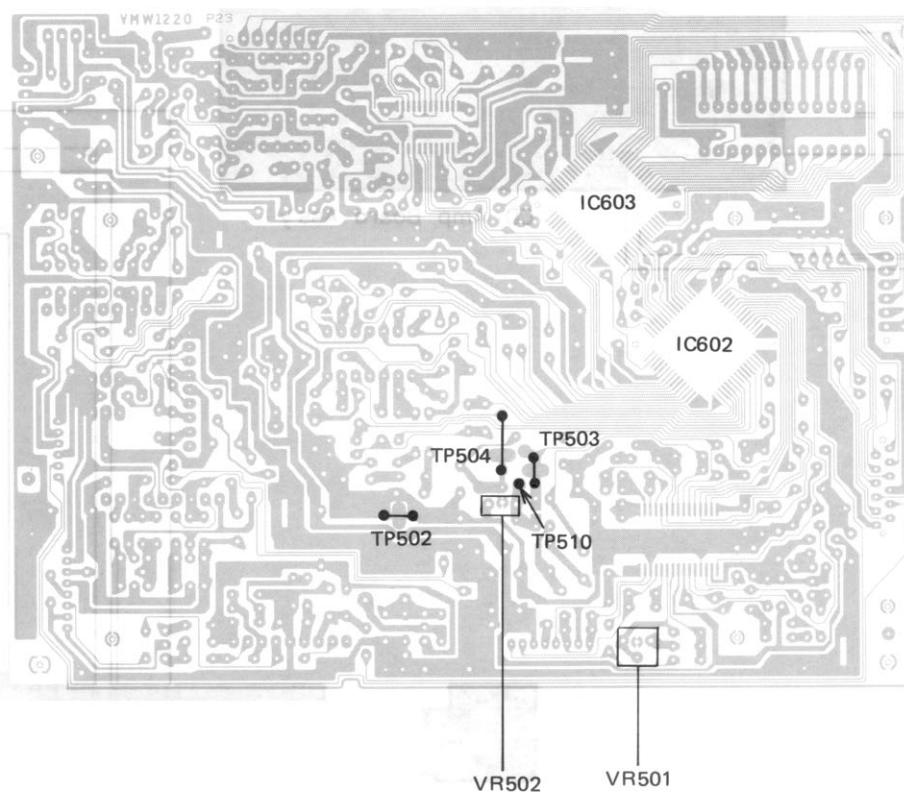


Fig. 8-4

**■ CD Section : Location of Adjustment****Fig. 8-5****Fig. 8-6**

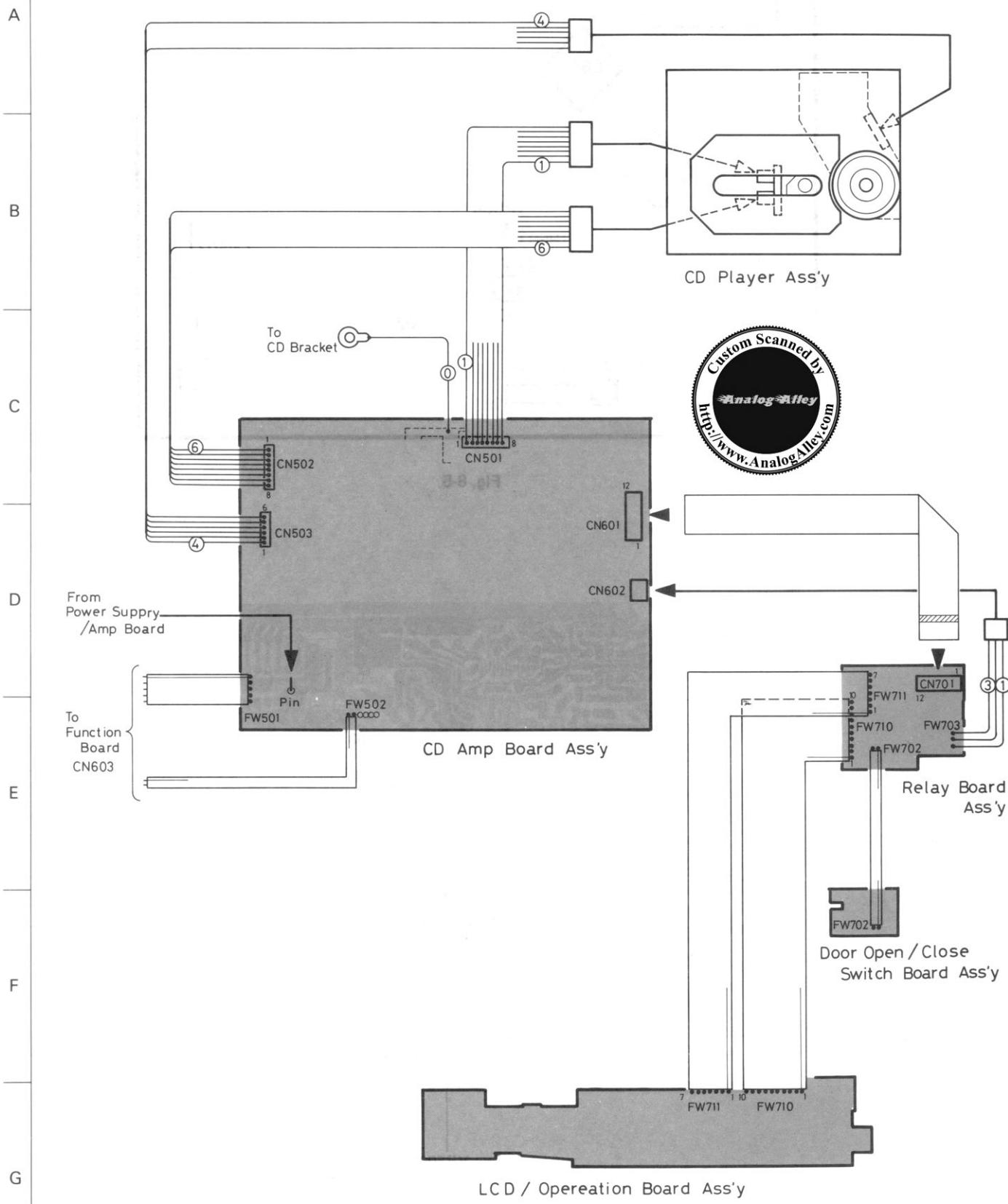
## **9** Wiring Connections

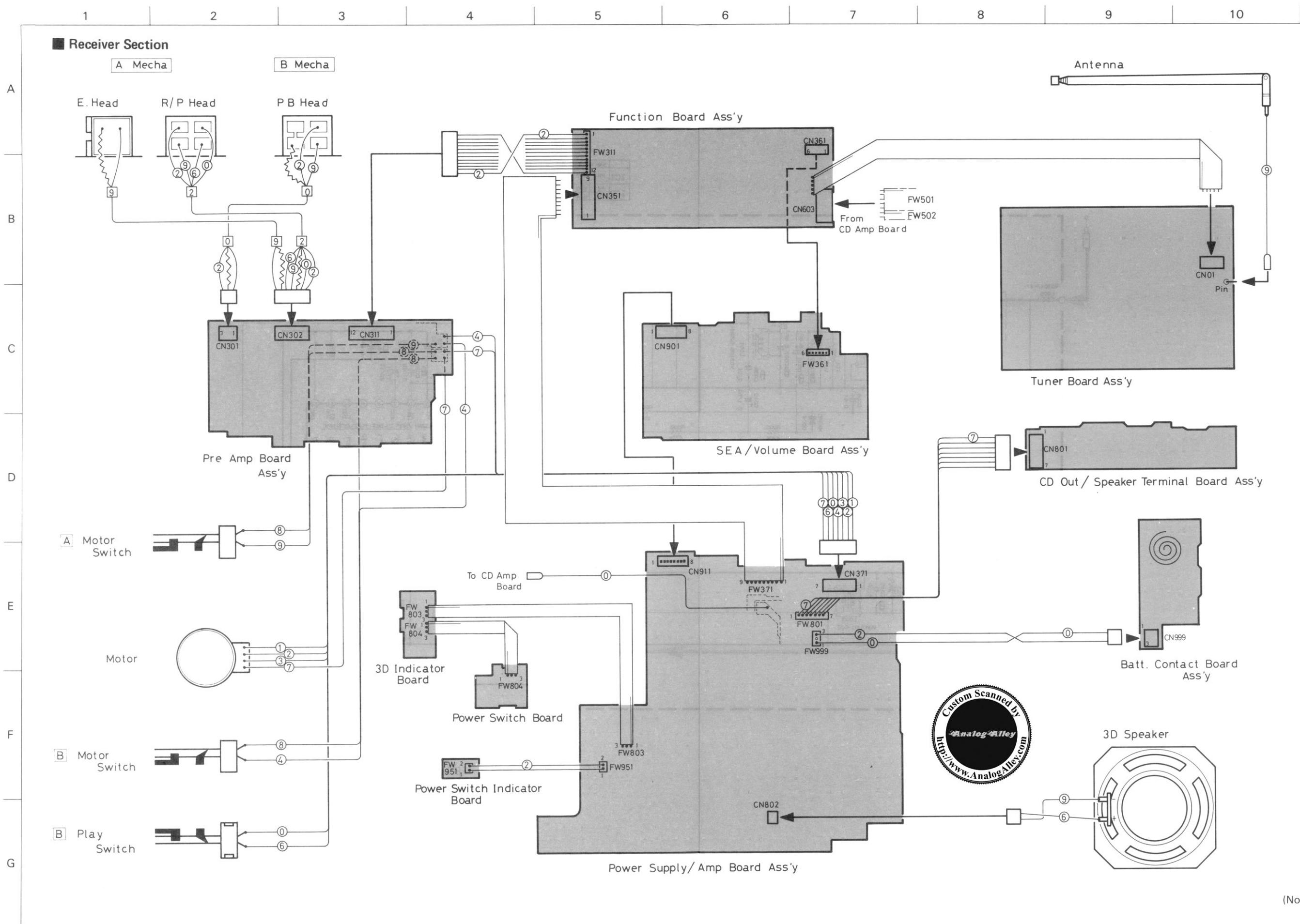
1

6

63

## ■ CD Sections





## 10 Standard Schematic Diagram (Tuner Section : Drawing number VDH7054-001TW)

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

A

B

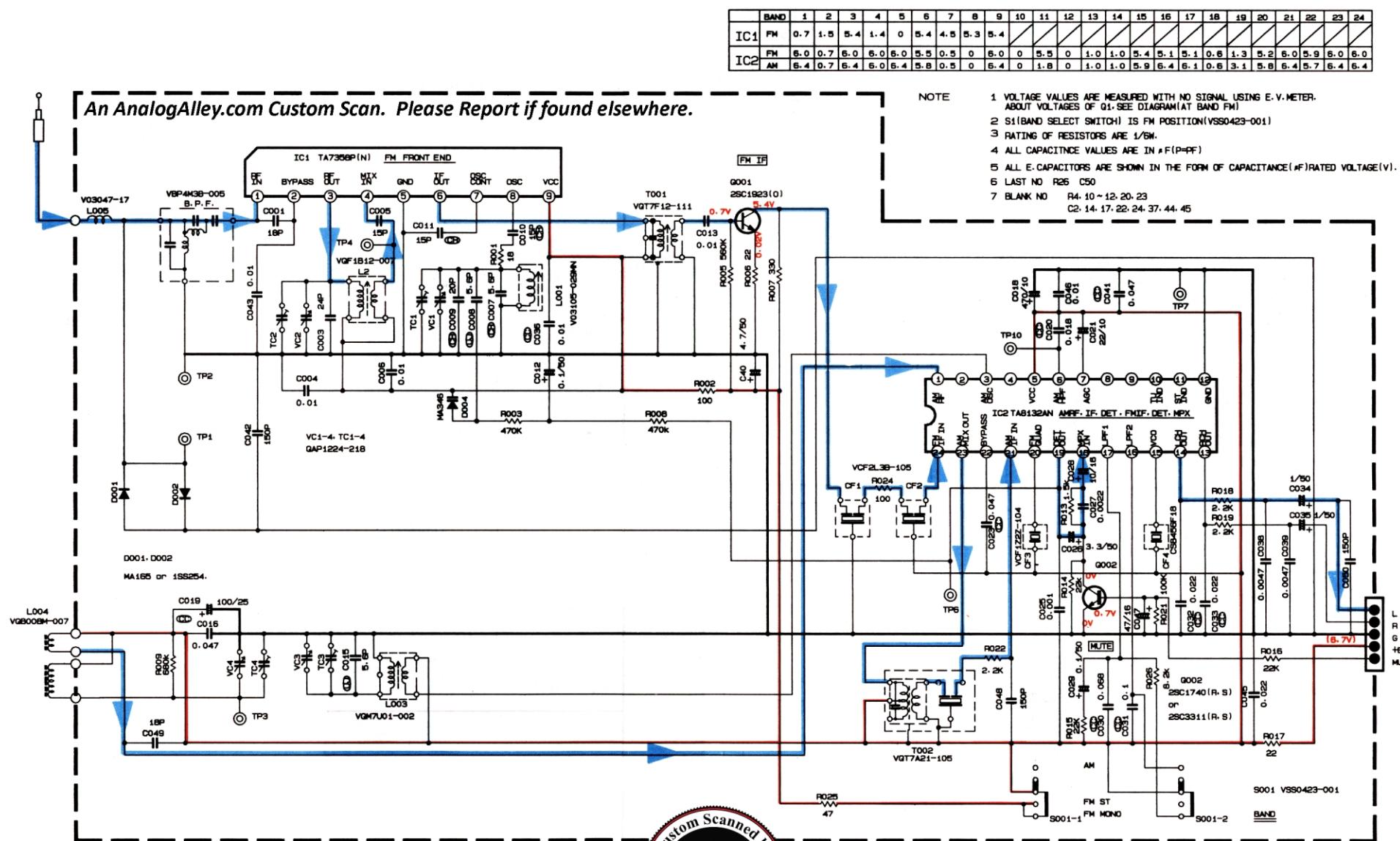
C

D

E

F

G



FM/AM Radio signal

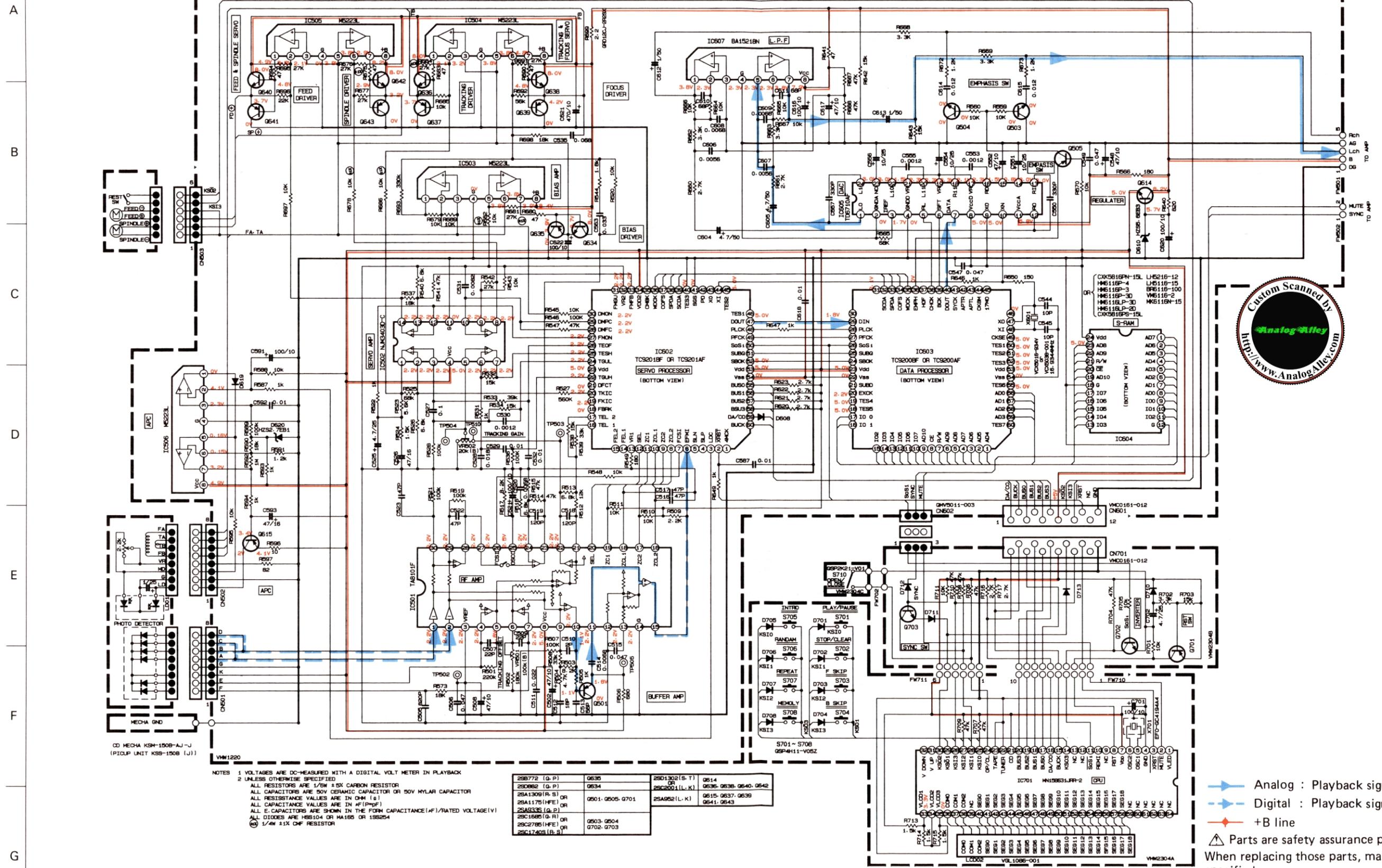
+B line

⚠ Parts are safety assurance parts.

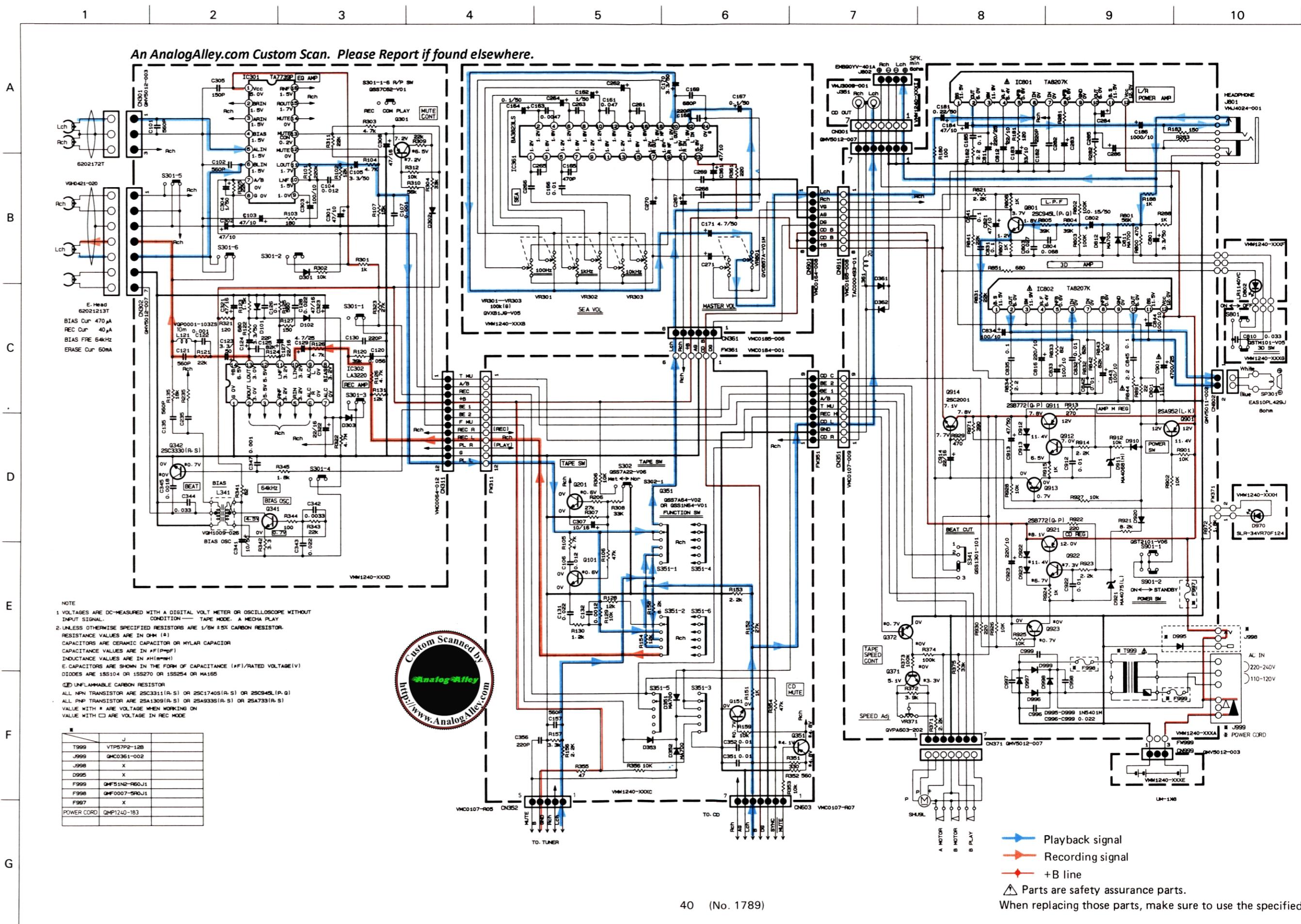
When replacing those parts, make sure to use the specified one.

(Amplifier Section : Drawing number VDH7054-001AV)

1 2 3 4 5 6 7 8 9 10

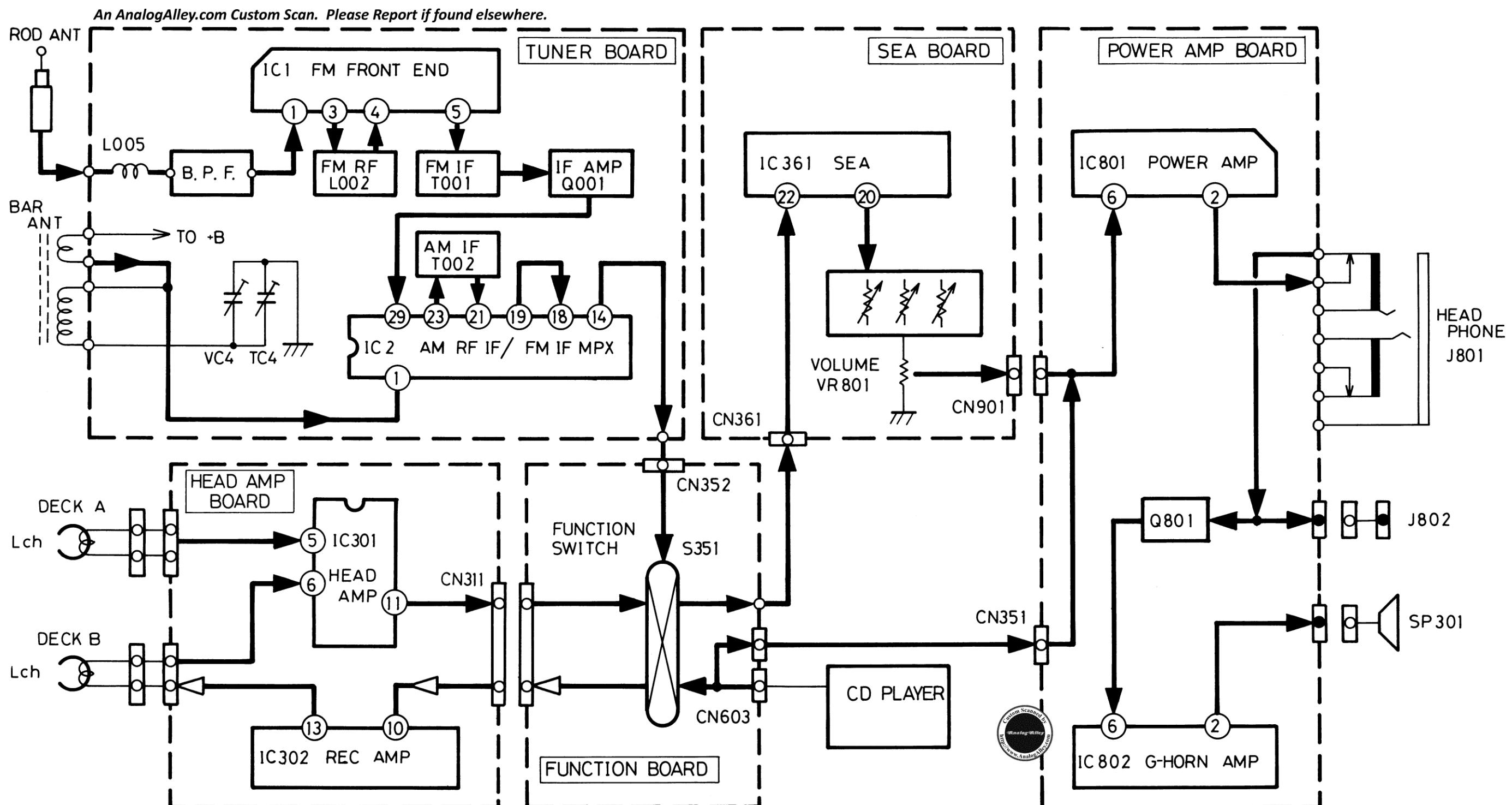
*An AnalogAlley.com Custom Scan. Please Report if found elsewhere.*

(CD Amplifier Section : Drawing number VDH7054-001CV)



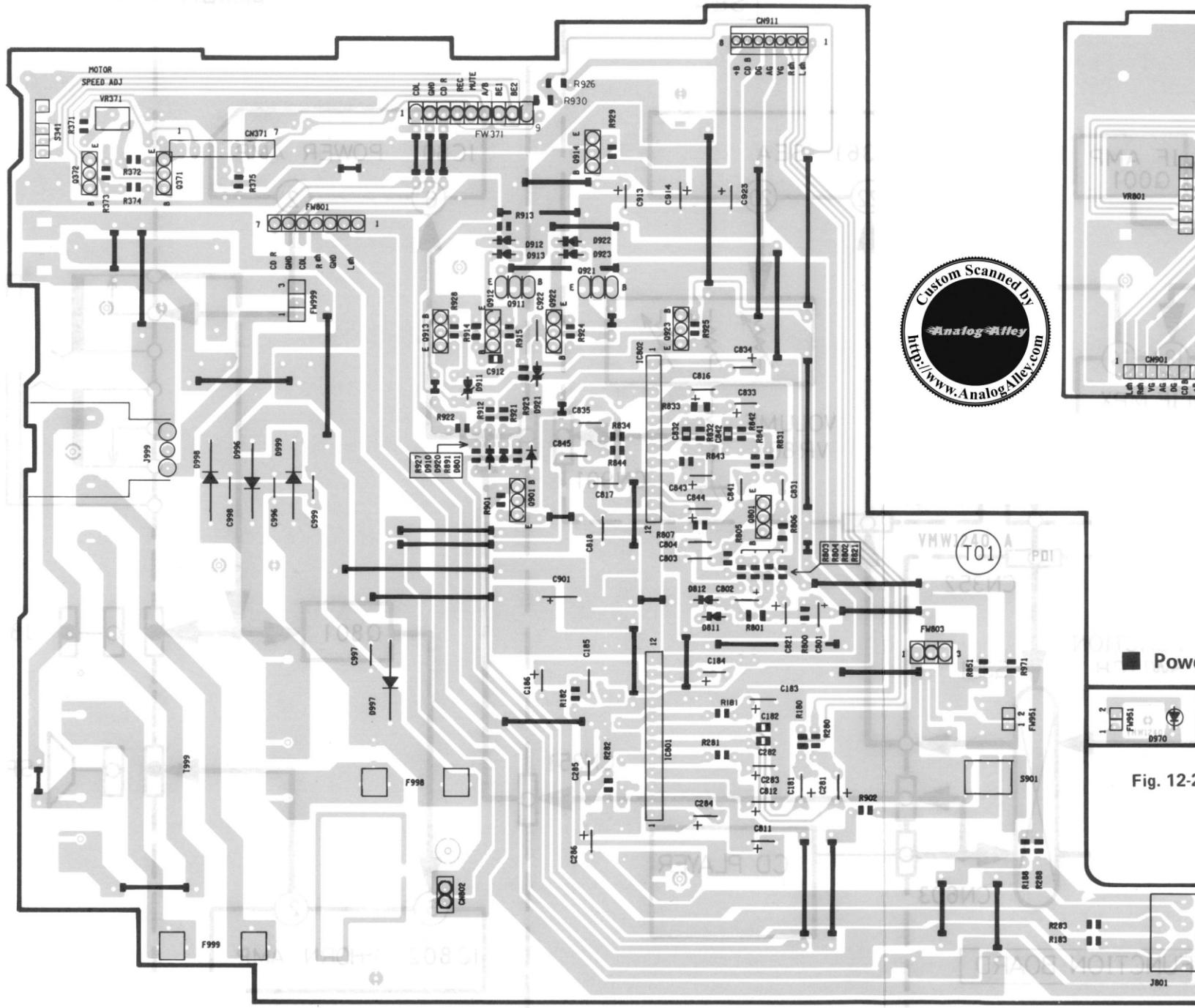
40 (No. 1789)

## 11 Block Diagram



## **12 Location of P.C. Board Parts and Parts List**

■ Power Supply/Amplifier Board  
Drawing No. VMW1240A



**Fig. 12-1**

■ SEA/Volume Board  
Drawing No. VMW1240

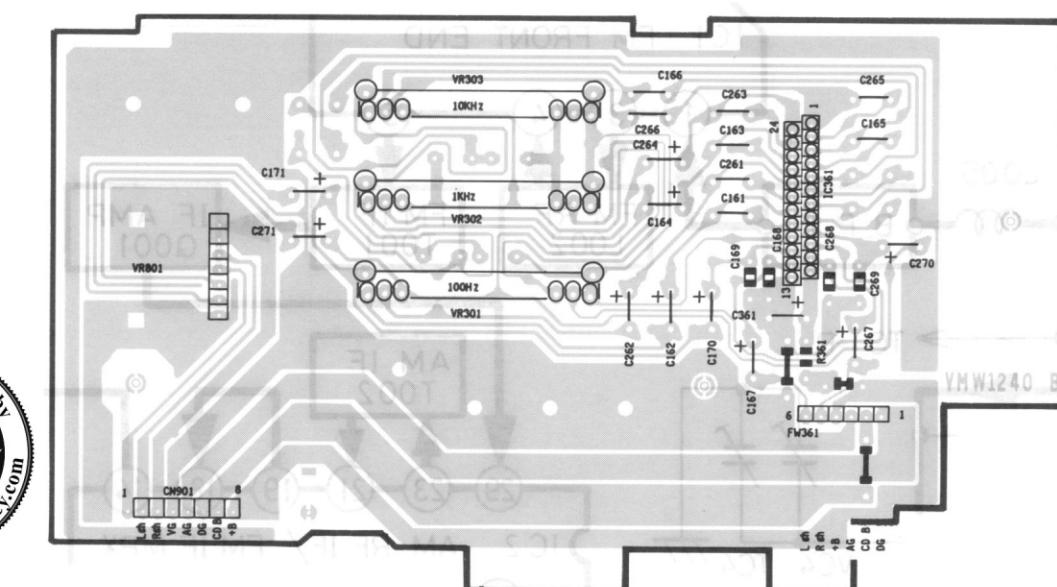


Fig. 12-

#### ■ Power Switch Indicator Board

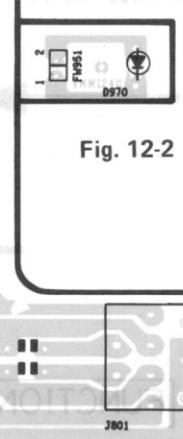
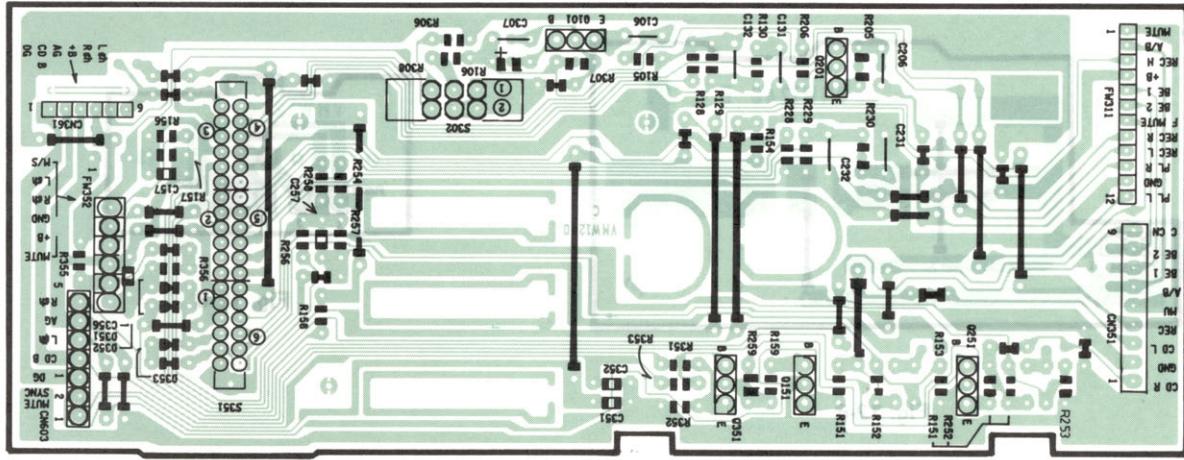


Fig. 12

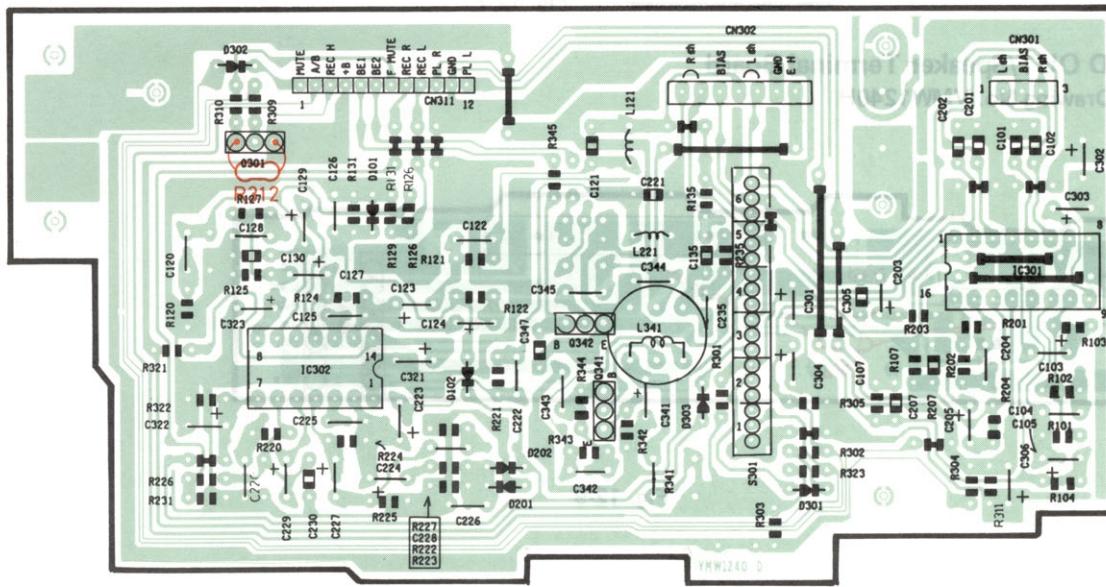
## ■ Function Board : Drawing No. VMW1240C



**Fig. 12-4**

A circular logo with a red and black border containing the text "Custom Scanned by" at the top and "Analog Alley" in green at the bottom, with a website URL "http://www.AnalogAlley.com" at the bottom.

■ Pre-amplifier Board : Drawing No. VMW1240D



**Fig. 12-5**

**Battery Contact Board**  
Drawing No. VMW1240E

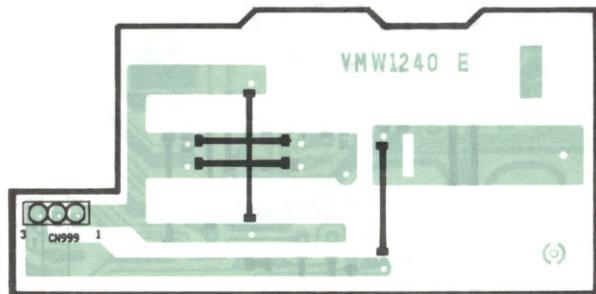


Fig. 12-6

**3D Indicator Board**  
Drawing No. VMW1240F

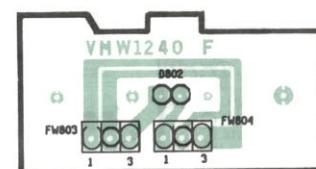


Fig. 12-8

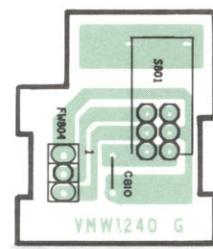


Fig. 12-7

**CD OUT/Speaker Terminal Board**  
Drawing No. VMW1240H

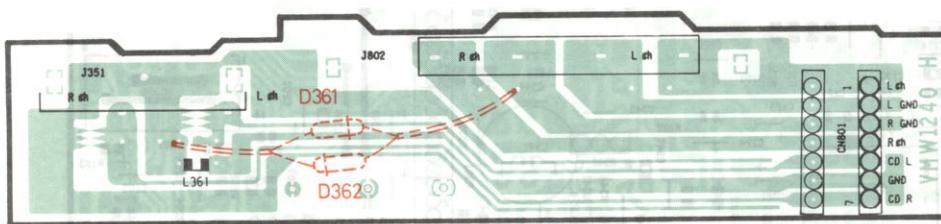


Fig. 12-9

parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

■ Main P.C. Board Parts List : Drawing No. VMW1240A-J

▲ REF.	PARTS NO.	PARTS NAME		REMARKS
	CN301 QMV5012-003	CONNECTOR		
	CN302 QMV5012-007	CONNECTOR		
	CN311 VMC0064-012	CONNECTOR		
	CN351 VMC0107-009	CONNECTOR		
	CN361 VMC0185-006	CONNECTOR		
	CN371 QMV5012-007	CONNECTOR		
	CN603 VMC0107-R07	SOCKET		
	CN801 QMV5012-007	CONNECTOR		
	CN802 QMV5011-002	CONNECTOR		
	CN901 VMC0164-008	CONNECTOR		
	CN911 VMC0165-008	CONNECTOR		
	CN999 QMV5012-003	CONNECTOR		
	C101 QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C102 QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C103 QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C104 QFV41HJ-123	TF CAPACITOR		.012MF 5% 50V
	C105 QETC1HM-335ZN	E.CAPACITOR		3.3MF 20% 50V
	C106 QCC11EM-123	C.CAPACITOR		.012MF 20% 25V
	C107 QCBB1HK-102Y	C.CAPACITOR		1000PF 10% 50V
	C120 QFV71HJ-563ZM	TF.CAPACITOR		.056MF 5% 50V
	C121 QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C122 QCY41HK-102	C.CAPACITOR		1000PF 10% 50V
	C123 QER61HM-335Z	E CAPACITOR		3.3MF 20% 50V
	C124 QER61HM-335Z	E CAPACITOR		3.3MF 20% 50V
	C125 QCS11HJ-220	C.CAPACITOR		22PF 5% 50V
	C126 QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C127 QER41CM-226	E CAPACITOR		22MF 20% 16V
	C128 QFV41HJ-223	TF.CAPACITOR		.022MF 5% 50V
	C129 QER41EM-475	E CAPACITOR		4.7MF 20% 25V
	C130 QCBB1HK-221Y	C.CAPACITOR		220PF 10% 50V
	C131 QCC11EM-223	C.CAPACITOR		.022MF 20% 25V
	C132 QCY41HK-122	C.CAPACITOR		1200PF 10% 50V
	C135 QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C157 QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C161 QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C162 QER41HM-105	E CAPACITOR		1.0MF 20% 50V
	C163 QCY41HK-472	C.CAPACITOR		4700PF 10% 50V
	C164 QETC1HM-104ZN	E.CAPACITOR		.10MF 20% 50V
	C165 QCS11HJ-471	C.CAPACITOR		470PF 5% 50V
	C166 QCC11EM-103	C.CAPACITOR		.010MF 20% 25V
	C167 QETC1HM-104ZN	E.CAPACITOR		.10MF 20% 50V
	C168 QCBB1HK-221Y	C.CAPACITOR		220PF 10% 50V
	C169 QCBB1HK-102Y	C.CAPACITOR		1000PF 10% 50V
	C170 QETC1HM-335ZN	E.CAPACITOR		3.3MF 20% 50V
	C171 QETC1HM-475ZN	E.CAPACITOR		4.7MF 20% 50V
	C181 QETC1HM-104ZN	E.CAPACITOR		.10MF 20% 50V
	C182 QCBB1HK-221Y	C.CAPACITOR		220PF 10% 50V
	C183 QETC1AM-336ZN	E CAPACITOR		33MF 20% 10V
	C184 QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C185 QCC11EM-104	C.CAPACITOR		.10MF 20% 25V

 parts are safety assurance parts.  
When replacing those parts, make sure to use the specified one.

▲	REF.	PARTS NO.	PARTS NAME		REMARKS
	C186	QETC1AM-108ZM	E.CAPACITOR		1000MF 20% 10V
	C201	QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C202	QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C203	QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C204	QFV41HJ-123	TF.CAPACITOR		.012MF 5% 50V
	C205	QETC1HM-335ZN	E.CAPACITOR		3.3MF 20% 50V
	C206	QCC11EM-123	C.CAPACITOR		.012MF 20% 25V
	C207	QCBB1HK-102Y	C.CAPACITOR		1000PF 10% 50V
	C220	QFV71HJ-563ZN	TF.CAPACITOR		.056MF 5% 50V
	C221	QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C222	QCY41HK-102	C.CAPACITOR		1000PF 10% 50V
	C223	QER61HM-335Z	E.CAPACITOR		3.3MF 20% 50V
	C224	QER61HM-335Z	E.CAPACITOR		3.3MF 20% 50V
	C225	QCS11HJ-220	C.CAPACITOR		22PF 5% 50V
	C226	QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C227	QER41CM-226	E.CAPACITOR		22MF 20% 16V
	C228	QFV41HJ-223	TF.CAPACITOR		.022MF 5% 50V
	C229	QER41EM-475	E.CAPACITOR		4.7MF 20% 25V
	C230	QCBB1HK-221Y	C.CAPACITOR		220PF 10% 50V
	C231	QCC11EM-223	C.CAPACITOR		.022MF 20% 25V
	C232	QCY41HK-122	C.CAPACITOR		1200PF 10% 50V
	C235	QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C257	QCBB1HK-561Y	C.CAPACITOR		560PF 10% 50V
	C261	QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C262	QER41HM-105	E.CAPACITOR		1.0MF 20% 50V
	C263	QCY41HK-472	C.CAPACITOR		4700PF 10% 50V
	C264	QETC1HM-104ZN	E.CAPACITOR		.10MF 20% 50V
	C265	QCS11HJ-471	C.CAPACITOR		470PF 5% 50V
	C266	QCC11EM-103	C.CAPACITOR		.010MF 20% 25V
	C267	QETC1HM-104ZN	E.CAPACITOR		.10MF 20% 50V
	C268	QCBB1HK-221Y	C.CAPACITOR		220PF 10% 50V
	C269	QCBB1HK-102Y	C.CAPACITOR		1000PF 10% 50V
	C270	QETC1HM-335ZN	E.CAPACITOR		3.3MF 20% 50V
	C271	QETC1HM-475ZN	E.CAPACITOR		4.7MF 20% 50V
	C281	QETC1HM-104ZN	E.CAPACITOR		.10MF 20% 50V
	C282	QCBB1HK-221Y	C.CAPACITOR		220PF 10% 50V
	C283	QETC1AM-336ZN	E.CAPACITOR		33MF 20% 10V
	C284	QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C285	QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C286	QETC1AM-108ZM	E.CAPACITOR		1000MF 20% 10V
	C301	QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C302	QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C303	QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C304	QETC1HM-105ZN	E.CAPACITOR		1.0MF 20% 50V
	C305	QCBB1HK-151Y	C.CAPACITOR		150PF 10% 50V
	C306	QETC1CM-476ZN	E.CAPACITOR		47MF 20% 16V
	C307	QETC1CM-106ZN	E.CAPACITOR		10MF 20% 16V
	C321	QER41CM-476	E.CAPACITOR		47MF 20% 16V
	C322	QER41CM-226	E.CAPACITOR		22MF 20% 16V
	C323	QER41CM-476	E.CAPACITOR		47MF 20% 16V

parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

△ REF.	PARTS NO.	PARTS NAME		REMARKS
	C341 QETC1HM-106ZN	E.CAPACITOR		10MF 20% 50V
	C342 QCY41HK-332	C CAPACITOR		3300PF 10% 50V
	C343 QCC11EM-223	C.CAPACITOR		.022MF 20% 25V
	C344 QFV41HJ-333	TF.CAPACITOR		.033MF 5% 50V
	C345 QCY41HK-182	C.CAPACITOR		1800PF 10% 50V
	C347 QCBB1HK-102Y	C.CAPACITOR		1000PF 10% 50V
	C351 QCVB1CM-103Y	C.CAPACITOR		.010MF 20% 16V
	C352 QCVB1CM-103Y	C.CAPACITOR		.010MF 20% 16V
	C356 QCBB1HK-221Y	C.CAPACITOR		220PF 10% 50V
	C361 QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C801 QETC1HM-335ZN	E.CAPACITOR		3.3MF 20% 50V
	C802 QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C803 QCC31EM-273ZV	C.CAPACITOR		.027MF 20% 25V
	C804 QCC11EM-683	C.CAPACITOR		.068MF 20% 25V
	C810 QCC11EM-333	C.CAPACITOR		.033MF 20% 25V
	C811 QETC1EM-227ZM	E.CAPACITOR		220MF 20% 25V
	C812 QETC1AM-226ZN	E.CAPACITOR		22MF 20% 10V
	C816 QETC1AM-227ZN	E CAPACITOR		220MF 20% 10V
	C817 QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C818 QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C821 QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C831 QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C832 QCVB1CM-103Y	C.CAPACITOR		.010MF 20% 16V
	C833 QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C834 QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C835 QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C841 QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C842 QCVB1CM-103Y	C.CAPACITOR		.010MF 20% 16V
	C843 QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C844 QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
△	C845 QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C901 QETB1EM-478	E.CAPACITOR		4700MF 20% 25V
	C912 QCVB1CM-103Y	C.CAPACITOR		.010MF 20% 16V
	C913 QETC1HM-476ZN	E CAPACITOR		47MF 20% 50V
	C914 QETC1CM-226ZN	E.CAPACITOR		22MF 20% 16V
	C922 QCVB1CM-103Y	C.CAPACITOR		.010MF 20% 16V
	C923 QETC1AM-227ZN	E CAPACITOR		220MF 20% 10V
	C996 QCF11HP-223	C.CAPACITOR		.022MF +100:-0% 50V
	C997 QCF11HP-223	C.CAPACITOR		.022MF +100:-0% 50V
	C998 QCF11HP-223	C.CAPACITOR		.022MF +100:-0% 50V
	C999 QCF11HP-223	C.CAPACITOR		.022MF +100:-0% 50V
	D101 MA165	SI DIODE		
	D102 MA165	SI DIODE		
	D201 MA165	SI DIODE		
	D202 MA165	SI DIODE		
	D301 MA165	SI DIODE		
	D302 MA165	SI DIODE		
	D303 MA165	SI DIODE		
	D351 MA700	ZENER DIODE		
	D352 MA700	ZENER DIODE		

**⚠ parts are safety assurance parts.**  
When replacing those parts, make sure to use the specified one.

△	REF.	PARTS NO.	PARTS NAME		REMARKS
	D353 D361 D362 D801 D802	MA165 MA165 MA165 11E1 LR-1140VC	SI DIODE SI DIODE SI DIODE SI.DIODE L.E.D.		
	D811 D812 D910 D911 D912	MA700 MA700 MA165 MA4068(H) MA165	ZENER DIODE ZENER DIODE SI DIODE Z DIODE SI DIODE		
	D913 D920 D921 D922 D923	MA165 MA165 MA4075(L) MA165 MA165	SI DIODE SI DIODE Z DIODE SI DIODE SI DIODE		
	D970 D996 D997 D998 D999	SLR-34VR70F124 1N5401M 1N5401M 1N5401M 1N5401M	LED I.M DIODE DIODE DIODE DIODE		
	FW352 FW361 IC301 IC302 IC361	VWS105-45B33K VMC0184-001 TA7739P LA3220 BA3823LS	EF FLAT WIRE CONNECTOR IC IC IC		
△	IC801 △ IC802 J351 J801 J802	TA8207K TA8207K VMJ3009-001 VMJ4024-001 EMB90YV-401A	IC IC JACK ASSY JACK SPK.TERMINAL		
	J999 L121 L221 L341 L361	QMC0361-002 VQP0001-103S VQP0001-103S VQH1009-026 TAC000493-01	AC SOCKET INDUCTOR INDUCTOR OSC COIL INDUCTOR		
	Q101 Q151 Q201 Q251 Q301	2SC3311 2SC3311 2SC3311 2SC3311 2SA1175	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
	Q341 Q342 Q351 Q371 Q372	2SC3311 2SC3311 2SA1175 2SC3311 2SC3311	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
△	Q801 Q901 Q911 Q912 Q913	2SC945L(P,Q) 2SA952(L,K) 2SB772(Q,P) 2SC3311 2SC3311	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		

**⚠ parts are safety assurance parts.**  
When replacing those parts, make sure to use the specified one.

⚠ REF.	PARTS NO.	PARTS NAME		REMARKS
⚠ Q914 Q921 Q922 Q923 R101	2SC2001(L,K) 2SB772(Q,P) 2SC3311 2SC3311 QRD161J-224	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR C.RESISTOR		220K 5% 1/6W
	R102	QRD161J-123	C.RESISTOR	12K 5% 1/6W
	R103	QRD161J-181	C RESISTOR	180 5% 1/6W
	R104	QRD161J-472	C.RESISTOR	4.7K 5% 1/6W
	R105	QRD161J-472	C.RESISTOR	4.7K 5% 1/6W
	R106	QRD161J-473	C.RESISTOR	47K 5% 1/6W
R107 R120 R121 R122 R123	QRD161J-153 QRD161J-393 QRD161J-223 QRD161J-681 QRD161J-152	C.RESISTOR C RESISTOR C.RESISTOR C.RESISTOR C.RESISTOR		15K 5% 1/6W 39K 5% 1/6W 22K 5% 1/6W 680 5% 1/6W 1.5K 5% 1/6W
	R124	QRD161J-823	C RESISTOR	82K 5% 1/6W
	R125	QRD161J-561	C RESISTOR	560 5% 1/6W
	R126	QRD161J-472	C.RESISTOR	4.7K 5% 1/6W
	R127	QRD161J-151	C RESISTOR	150 5% 1/6W
	R128	QRD161J-123	C.RESISTOR	12K 5% 1/6W
R129 R130 R131 R135 R151	QRD161J-103 QRD161J-122 QRD161J-123 QRD161J-183 QRD161J-102	C.RESISTOR C RESISTOR C.RESISTOR C.RESISTOR C.RESISTOR		10K 5% 1/6W 1.2K 5% 1/6W 12K 5% 1/6W 18K 5% 1/6W 1.0K 5% 1/6W
	R152	QRD161J-273	C RESISTOR	27K 5% 1/6W
	R153	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W
	R154	QRD161J-123	C.RESISTOR	12K 5% 1/6W
	R156	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W
	R157	QRD161J-332	C.RESISTOR	3.3K 5% 1/6W
R158 R159 R180 R181 R182	QRD161J-822 QRD161J-103 QRD161J-101 QRD161J-121 QRD161J-2R2	C.RESISTOR C.RESISTOR C.RESISTOR CARBON RESISTOR CARBON RESISTOR		8.2K 5% 1/6W 10K 5% 1/6W 100 5% 1/6W 120 5% 1/6W 2.2 5% 1/6W
	R183	QRD161J-151	CARBON RESISTOR	150 5% 1/6W
	R188	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
	R201	QRD161J-224	C.RESISTOR	220K 5% 1/6W
	R202	QRD161J-123	C.RESISTOR	12K 5% 1/6W
	R203	QRD161J-181	C RESISTOR	180 5% 1/6W
R204 R205 R206 R207 R220	QRD161J-472 QRD161J-472 QRD161J-473 QRD161J-153 QRD161J-393	C.RESISTOR C.RESISTOR C.RESISTOR C.RESISTOR C RESISTOR		4.7K 5% 1/6W 4.7K 5% 1/6W 47K 5% 1/6W 15K 5% 1/6W 39K 5% 1/6W
	R221	QRD161J-223	C.RESISTOR	22K 5% 1/6W
	R222	QRD161J-681	C.RESISTOR	680 5% 1/6W
	R223	QRD161J-152	C.RESISTOR	1.5K 5% 1/6W
	R224	QRD161J-823	C RESISTOR	82K 5% 1/6W
	R225	QRD161J-561	C RESISTOR	560 5% 1/6W

**⚠ parts are safety assurance parts.**  
When replacing those parts, make sure to use the specified one.

REF.	PARTS NO.	PARTS NAME	REMARKS
R226	QRD161J-472	C.RESISTOR	4.7K 5% 1/6W
R227	QRD161J-151	C RESISTOR	150 5% 1/6W
R228	QRD161J-123	C.RESISTOR	12K 5% 1/6W
R229	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R230	QRD161J-122	C RESISTOR	1.2K 5% 1/6W
R231	QRD161J-123	C.RESISTOR	12K 5% 1/6W
R235	QRD161J-183	C.RESISTOR	18K 5% 1/6W
R251	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R252	QRD161J-273	C RESISTOR	27K 5% 1/6W
R253	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W
R254	QRD161J-123	C.RESISTOR	12K 5% 1/6W
R256	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W
R257	QRD161J-332	C.RESISTOR	3.3K 5% 1/6W
R258	QRD161J-822	C.RESISTOR	8.2K 5% 1/6W
R259	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R280	QRD161J-101	C.RESISTOR	100 5% 1/6W
R281	QRD161J-121	CARBON RESISTOR	120 5% 1/6W
R282	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W
R283	QRD161J-151	CARBON RESISTOR	150 5% 1/6W
R288	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R301	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R302	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R303	QRD161J-472	C.RESISTOR	4.7K 5% 1/6W
R304	QRD161J-333	C.RESISTOR	33K 5% 1/6W
R305	QRD161J-223	C.RESISTOR	22K 5% 1/6W
R306	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R307	QRD161J-273	C RESISTOR	27K 5% 1/6W
R308	QRD161J-333	C.RESISTOR	33K 5% 1/6W
R309	QRD161J-223	C.RESISTOR	22K 5% 1/6W
R310	QRD161J-563	C RESISTOR	56K 5% 1/6W
R311	QRD161J-223	C.RESISTOR	22K 5% 1/6W
R312	QRD161J-103	C RESISTOR	10K 5% 1/6W
R321	QRD161J-121	C.RESISTOR	120 5% 1/6W
R322	QRD161J-475	C RESISTOR	4.7M 5% 1/6W
R323	QRD161J-273	C RESISTOR	27K 5% 1/6W
R341	QRD14CJ-820SX	C RESISTOR	82 5% 1/4W
R342	QRD161J-3R3	C.RESISTOR	3.3 5% 1/6W
R343	QRD161J-223	C.RESISTOR	22K 5% 1/6W
R344	QRD161J-101	C.RESISTOR	100 5% 1/6W
R345	QRD161J-182	C RESISTOR	1.8K 5% 1/6W
R351	QRD161J-331	C.RESISTOR	330 5% 1/6W
R352	QRD161J-561	C RESISTOR	560 5% 1/6W
R353	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R355	QRD161J-470	C RESISTOR	47 5% 1/6W
R356	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R361	QRD161J-221	C RESISTOR	220 5% 1/6W
R371	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W
R372	QRD161J-392	C.RESISTOR	3.9K 5% 1/6W
R373	QRD161J-104	C.RESISTOR	100K 5% 1/6W
R374	QRD161J-104	C.RESISTOR	100K 5% 1/6W

parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

▲	REF.	PARTS NO.	PARTS NAME		REMARKS
	R375	QRD161J-333	C.RESISTOR		33K 5% 1/6W
	R800	QRD161J-471	C.RESISTOR		470 5% 1/6W
	R801	QRD161J-563	C RESISTOR		56K 5% 1/6W
	R802	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R803	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R804	QRD161J-393	C RESISTOR		39K 5% 1/6W
	R805	QRD161J-393	C RESISTOR		39K 5% 1/6W
	R806	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R807	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R821	QRD161J-222	C.RESISTOR		2.2K 5% 1/6W
	R831	QRD161J-223	C.RESISTOR		22K 5% 1/6W
	R832	QRD161J-823	C RESISTOR		82K 5% 1/6W
	R833	QRD161J-820	C.RESISTOR		82 5% 1/6W
	R834	QRD161J-2R2	C RESISTOR		2.2 5% 1/6W
	R841	QRD161J-223	C.RESISTOR		22K 5% 1/6W
	R842	QRD161J-823	C RESISTOR		82K 5% 1/6W
	R843	QRD161J-820	C.RESISTOR		82 5% 1/6W
	R844	QRD161J-2R2	C RESISTOR		2.2 5% 1/6W
	R851	QRD161J-681	C.RESISTOR		680 5% 1/6W
	R891	QRD161J-220	CARBON RESISTOR		22 5% 1/6W
	R901	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R902	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R912	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R913	QRD161J-271	C RESISTOR		270 5% 1/6W
	R914	QRD161J-222	C.RESISTOR		2.2K 5% 1/6W
	R915	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R921	QRD161J-822	C.RESISTOR		8.2K 5% 1/6W
	R922	QRD161J-221	C RESISTOR		220 5% 1/6W
	R923	QRD161J-222	C.RESISTOR		2.2K 5% 1/6W
	R924	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R925	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R926	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R927	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R928	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R929	QRD161J-471	C.RESISTOR		470 5% 1/6W
	R930	QRD161J-221	C RESISTOR		220 5% 1/6W
	R971	QRD161J-391	C RESISTOR		390 5% 1/6W
	R972	QRD161J-182	CARBON RESISTOR		1.8K 5% 1/6W
	S301	QSS7C62-V01	SLIDE SW		
	S302	QSS7A22-V06	SLIDE SW		
	S341	QSS1301-101	SLIDE SWITCH		
	S351	QSS1N64-V01	SLIDE SW		
	S701	QSS7A22-V06	SLIDE SW		
	S801	QSTM101-V05	PUSH SW		
	S901	QST2101-V06	PUSH SWITCH		
	VR301	QVXB1JG-V05	V RESISTOR		
	VR302	QVXB1JG-V05	V RESISTOR		
	VR303	QVXB1JG-V05	V RESISTOR		
	VR371	QVPA603-202M	V RESISTOR		
	VR801	QVDB57A-V01M	V RESISTOR		

## ■ Tuner Board : Drawing No. VMW2301

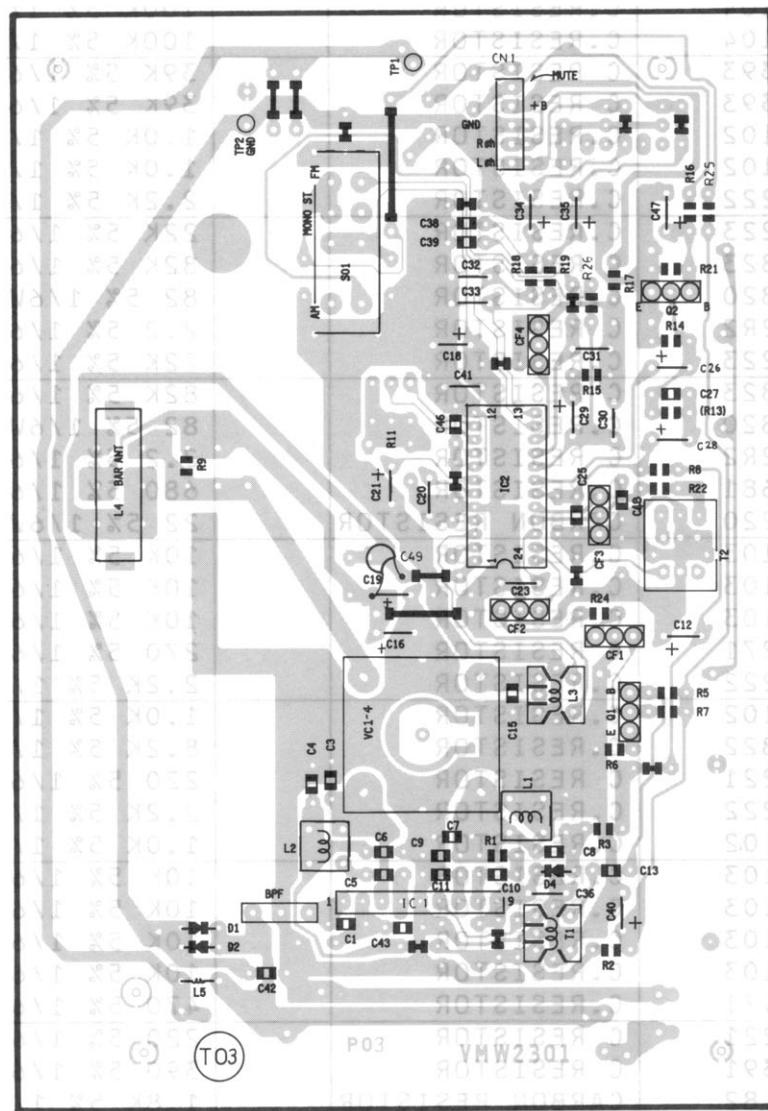


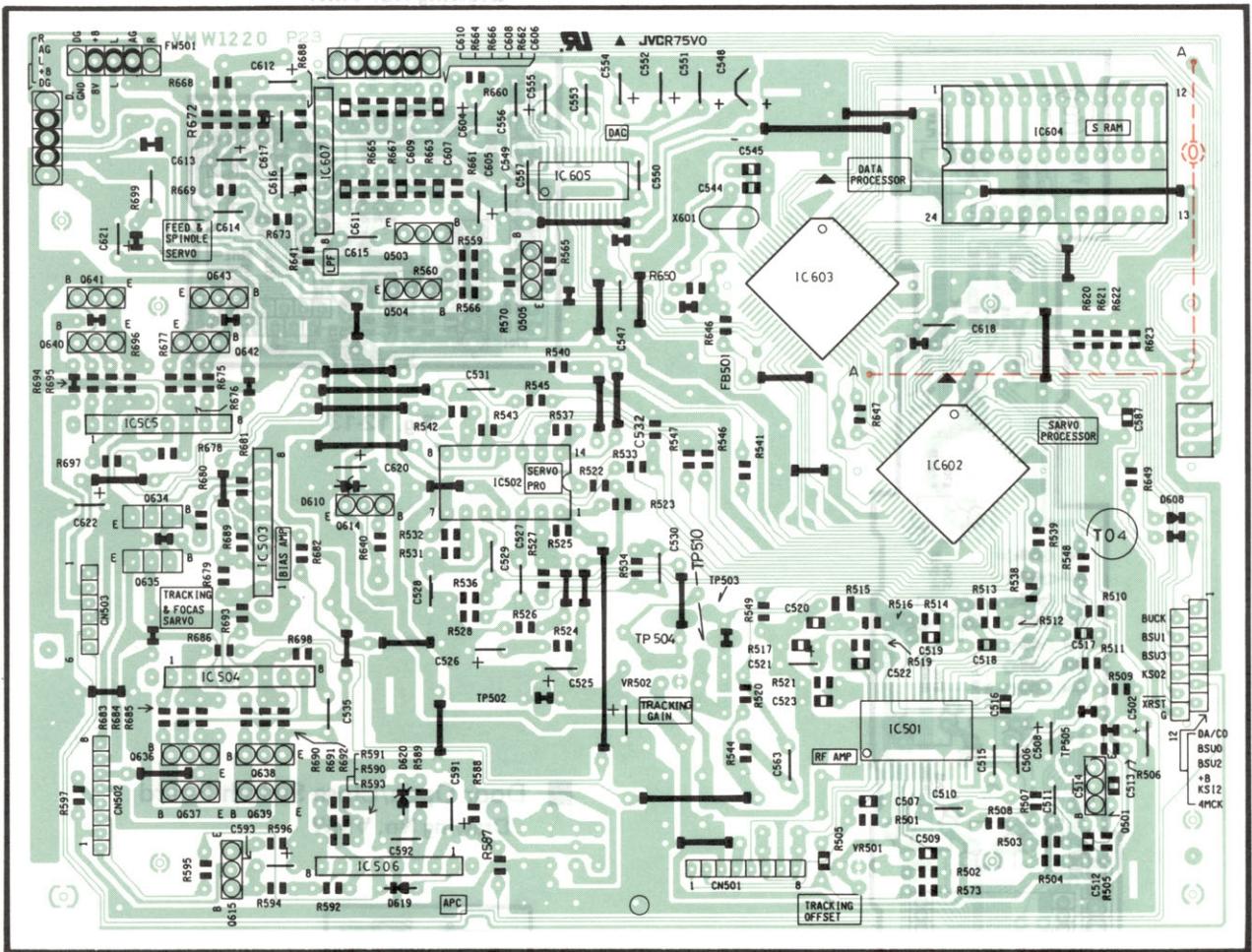
Fig. 12-10

## ■ Tuner Board Parts List : Drawing No. VMW2301

▲	REF.	PARTS NO.	PARTS NAME		REMARKS
	BPF1 CF04 CF03 CN01 C001	VBP4M3B-005 CSB456F18 VCF1Z2Z-104 VMCO107-005 QCS11HJ-180	BP FILTER CERA LOCK C FILTER KIT CONNECTOR C CAPACITOR		18PF 5% 50V
	C003 C004 C005 C006 C007	QCS11HJ-240 QCVB1CN-103Y QCS11HJ-150 QCVB1CN-103Y QCT05CH-200	C.CAPACITOR C.CAPACITOR C.CAPACITOR C.CAPACITOR C.CAPACITOR		24PF 5% 50V .010MF 30% 16V 15PF 5% 50V .010MF 30% 16V 20PF 5% 50V
	C008 C009 C010 C011 C012	QCT30UJ-5R6Y QCT30CH-5R6Y QCT05CH-150 QCT05CH-150 QETC1HM-104ZN	C.CAPACITOR C.CAPACITOR C.CAPACITOR C.CAPACITOR E.CAPACITOR		5.6PF 5% 50V 5.6PF 5% 50V 15PF 5% 50V 15PF 5% 50V .10MF 20% 50V
	C013 C015 C016 C018 C019	QCVB1CN-103Y QCT30UJ-5R6Y QCC11EM-473 QETC1AM-477ZN QETC1EM-107ZN	C.CAPACITOR C.CAPACITOR C.CAPACITOR E.CAPACITOR E.CAPACITOR		.010MF 30% 16V 5.6PF 5% 50V .047MF 20% 25V 470MF 20% 10V 100MF 20% 25V
	C020 C021 C023 C025 C026	QCC11EM-333 QETC1AM-226ZN QCC11EM-473 QCBB1HK-102Y QETC1HM-335ZN	C.CAPACITOR E.CAPACITOR C.CAPACITOR C.CAPACITOR E.CAPACITOR		.033MF 20% 25V 22MF 20% 10V .047MF 20% 25V 1000PF 10% 50V 3.3MF 20% 50V
	C027 C028 C029 C030 C031	QCXB1CM-222Y QETC1CM-106ZN QETC1HM-104ZN QCC11EM-683 QCC11EM-104	C.CAPACITOR E.CAPACITOR E.CAPACITOR C.CAPACITOR C.CAPACITOR		2200PF 20% 16V 10MF 20% 16V .10MF 20% 50V .068MF 20% 25V .10MF 20% 25V
	C032 C033 C034 C035 C036	QCC11EM-223 QCC11EM-223 QETC1HM-105ZN QETC1HM-105ZN QCC11EM-103	C.CAPACITOR C.CAPACITOR E.CAPACITOR E.CAPACITOR C.CAPACITOR		.022MF 20% 25V .022MF 20% 25V 1.0MF 20% 50V 1.0MF 20% 50V .010MF 20% 25V
	C038 C039 C040 C041 C042	QCXB1CM-472Y QCXB1CM-472Y QETC1EM-475ZN QCC11EM-473 QCBB1HK-151Y	C.CAPACITOR C.CAPACITOR E.CAPACITOR C.CAPACITOR C.CAPACITOR		4700PF 20% 16V 4700PF 20% 16V 4.7MF 20% 25V .047MF 20% 25V 150PF 10% 50V
	C043 C046 C047 C048 C049	QCVB1CN-103Y QCVB1CN-103Y QETC1CM-476ZN QCBB1HK-151Y QCS11HJ-180	C.CAPACITOR C.CAPACITOR E.CAPACITOR C.CAPACITOR C.CAPACITOR		.010MF 30% 16V .010MF 30% 16V 47MF 20% 16V 150PF 10% 50V 18PF 5% 50V
	D001 D002 D004 IC01 IC02	MA165 MA165 MA346 TA7358P(N) TA8132AN	SI DIODE SI DIODE VC DIODE IC IC		

REF.	PARTS NO.	PARTS NAME		REMARKS
L001	V03105-029	DSC COIL		
L002	VQF1B12-007	RF COIL		
L003	VQM7U01-002	DSC COIL(MW)		
L004	VQB008M-007	BAR ANTENA		
L005	V03047-17	COIL		
PWB	VMW2301-002	PW BOARD		
Q001	2SC1923	TRANSISTOR		
Q002	2SC3311	TRANSISTOR		
R001	QRD161J-180	C RESISTOR	18 5% 1/6W	
R002	QRD161J-101	C.RESISTOR	100 5% 1/6W	
R003	QRD161J-474	C RESISTOR	470K 5% 1/6W	
R005	QRD161J-564	C RESISTOR	560K 5% 1/6W	
R006	QRD161J-220	C.RESISTOR	22 5% 1/6W	
R007	QRD161J-331	C.RESISTOR	330 5% 1/6W	
R008	QRD161J-474	C RESISTOR	470K 5% 1/6W	
R009	QRD161J-474	C RESISTOR	470K 5% 1/6W	
R013	QRD161J-152	C.RESISTOR	1.5K 5% 1/6W	
R014	QRD161J-223	C.RESISTOR	22K 5% 1/6W	
R015	QRD161J-223	C.RESISTOR	22K 5% 1/6W	
R016	QRD161J-223	C.RESISTOR	22K 5% 1/6W	
R017	QRD161J-220	C.RESISTOR	22 5% 1/6W	
R018	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W	
R019	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W	
R021	QRD161J-104	C.RESISTOR	100K 5% 1/6W	
R022	QRD161J-222	C.RESISTOR	2.2K 5% 1/6W	
R024	QRD161J-101	C.RESISTOR	100 5% 1/6W	
R025	QRD161J-470	C RESISTOR	47 5% 1/6W	
R026	QRD161J-822	C.RESISTOR	8.2K 5% 1/6W	
S001	VSS0423-001	SLIDE SW		
TC1-4	QAP1224-218	V CAPACITOR		
T001	VQT7F12-111	IFT		
T002	VQT7A21-105	IFT		
VC1-4	QAP1224-218	V CAPACITOR		

■ CD Amplifier Board : Drawing No. VMW1220



**Fig. 12-11**

■ LCD/Operation Board  
Drawing No. VMW2304A

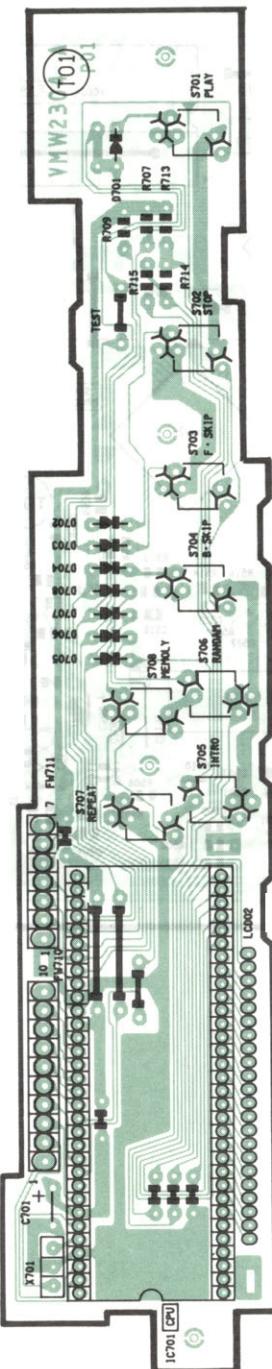
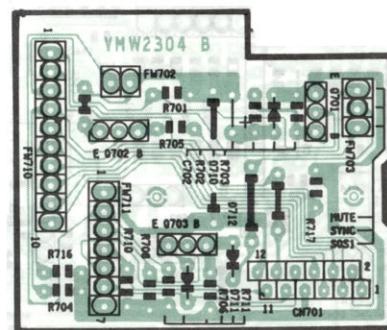


Fig. 12-12

**■ Relay Board**  
Drawing No. VMW



**Fig. 12-13**

**■ Door Open/Close Switch Board**  
Drawing No. VMW



Fig. 12-14

## ■ CD Control Board Parts List : Drawing No. VMW2304

△	REF.	PARTS NO.	PARTS NAME		REMARKS
	CN601	VMC0161-012	CONNECTOR		
	CN602	QMV5011-003	CONNECTOR		
	C502	QETC1AM-476ZN	E.CAPACITOR		
	C505	QCBB1HK-821Y	C.CAPACITOR		47MF 20% 10V
	C506	QCC11EM-473	C.CAPACITOR		820PF 10% 50V .047MF 20% 25V
	C507	QCS11HJ-220	C.CAPACITOR		22PF 5% 50V
	C508	QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C509	QCS11HJ-220	C.CAPACITOR		22PF 5% 50V
	C510	QCS11HJ-2R0	C.CAPACITOR		2.0PF 5% 50V
	C511	QCC11EM-223	C.CAPACITOR		.022MF 20% 25V
	C512	QCS11HJ-180	C CAPACITOR		18PF 5% 50V
	C513	QCS11HJ-560	C.CAPACITOR		56PF 5% 50V
	C514	QCY41HK-682	C.CAPACITOR		6800PF 10% 50V
	C515	QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C516	QCS11HJ-470	C CAPACITOR		47PF 5% 50V
	C517	QCS11HJ-470	C CAPACITOR		47PF 5% 50V
	C518	QCBB1HK-121Y	C.CAPACITOR		120PF 10% 50V
	C519	QCBB1HK-121Y	C.CAPACITOR		120PF 10% 50V
	C520	QCY41HK-682	C.CAPACITOR		6800PF 10% 50V
	C521	QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C522	QCS11HJ-470	C CAPACITOR		47PF 5% 50V
	C523	QCS11HJ-470	C CAPACITOR		47PF 5% 50V
	C525	QER41EM-475	E CAPACITOR		4.7MF 20% 25V
	C526	QER41CM-476	E.CAPACITOR		47MF 20% 16V
	C527	QFV41HJ-104	TF.CAPACITOR		.10MF 5% 50V
	C528	QFV41HJ-183	TF.CAPACITOR		.018MF 5% 50V
	C529	QFV41HJ-103	TF.CAPACITOR		.010MF 5% 50V
	C530	QCY41HK-122	C.CAPACITOR		1200PF 10% 50V
	C531	QCY41HK-822	C.CAPACITOR		8200PF 10% 50V
	C532	QCC11EM-103	C.CAPACITOR		.010MF 20% 25V
	C535	QFV41HJ-683	TF.CAPACITOR		.068MF 5% 50V
	C544	QCS11HJ-100	C CAPACITOR		10PF 5% 50V
	C545	QCS11HJ-100	C CAPACITOR		10PF 5% 50V
	C547	QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C548	QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C549	QCC11EM-473	C.CAPACITOR		.047MF 20% 25V
	C550	QCS11HJ-331	C.CAPACITOR		330PF 5% 50V
	C551	QETC1EM-106ZN	E.CAPACITOR		10MF 20% 25V
	C552	QETC1AM-476ZN	E.CAPACITOR		47MF 20% 10V
	C553	QCY41HK-122	C.CAPACITOR		1200PF 10% 50V
	C554	QETC1EM-106ZN	E.CAPACITOR		10MF 20% 25V
	C555	QCY41HK-122	C.CAPACITOR		1200PF 10% 50V
	C556	QETC1EM-106ZN	E.CAPACITOR		10MF 20% 25V
	C557	QCS11HJ-331	C.CAPACITOR		330PF 5% 50V
	C563	QFV41HJ-333	TF.CAPACITOR		.033MF 5% 50V
	C587	QCVB1CN-103Y	C.CAPACITOR		.010MF 30% 16V
	C591	QER61AM-107ZM	E CAPACITOR		100MF 20% 10V
	C592	QCC11EM-103	C.CAPACITOR		.010MF 20% 25V
	C593	QER41CM-476	E.CAPACITOR		47MF 20% 16V
	C604	QETC1HM-475ZN	E.CAPACITOR		4.7MF 20% 50V

A	REF.	PARTS NO.	PARTS NAME		REMARKS
	C605	QETC1HM-475ZN	E.CAPACITOR		4.7MF 20% 50V
	C606	QCXB1CM-562Y	C CAPACITOR		5600PF 20% 16V
	C607	QCXB1CM-562Y	C CAPACITOR		5600PF 20% 16V
	C608	QCXB1CM-682Y	C.CAPACITOR		6800PF 20% 16V
	C609	QCXB1CM-682Y	C.CAPACITOR		6800PF 20% 16V
	C610	QCS11HJ-680	C.CAPACITOR		68PF 5% 50V
	C611	QCS11HJ-680	C.CAPACITOR		68PF 5% 50V
	C612	QETC1HM-105ZN	E.CAPACITOR		1.0MF 20% 50V
	C613	QETC1HM-105ZN	E.CAPACITOR		1.0MF 20% 50V
	C614	QCC11EM-123	C.CAPACITOR		.012MF 20% 25V
	C615	QCC11EM-123	C.CAPACITOR		.012MF 20% 25V
	C616	QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C617	QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C618	QCC11EM-104	C.CAPACITOR		.10MF 20% 25V
	C620	QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	C621	QETC1AM-477ZN	E.CAPACITOR		470MF 20% 10V
	C622	QETC1AM-107ZN	E.CAPACITOR		100MF 20% 10V
	D608	MA165	SI DIODE		
	D610	HZS5.6EB3	Z DIODE		
	D619	MA165	SI DIODE		
	D620	HZS2.7EB1	Z DIODE		
	IC501	TA8101F	IC		
	IC502	NJM3403D-C	IC		
	IC503	M5223L	IC		
	IC504	M5223L	IC		
	IC505	M5223L	IC		
	IC602	TC9201AF	IC		
	IC603	TC9200AF	IC		
	IC604	CXK5816PN-15L	I.C		
	IC605	TD6710AF	IC		
	IC607	BA15218N	IC		
	Q501	2SA1175(HFE)	TRANSISTOR		
	Q503	2SC1685(Q,R)	TRANSISTOR		
	Q504	2SC1685(Q,R)	TRANSISTOR		
	Q505	2SA1175(HFE)	TRANSISTOR		
	Q614	2SD1302(S,T)	TRANSISTOR		
	Q615	2SA952(L,K)	TRANSISTOR		
	Q634	2SD882(Q,P)	TRANSISTOR		
	Q635	2SB772(Q,P)	TRANSISTOR		
	Q636	2SD1302(S,T)	TRANSISTOR		
	Q637	2SA952(L,K)	TRANSISTOR		
	Q638	2SD1302(S,T)	TRANSISTOR		
	Q639	2SA952(L,K)	TRANSISTOR		
	Q640	2SD1302(S,T)	TRANSISTOR		
	Q641	2SA952(L,K)	TRANSISTOR		
	Q642	2SD1302(S,T)	TRANSISTOR		
	Q643	2SA952(L,K)	TRANSISTOR		
	R501	QRD161J-224	C.RESISTOR		220K 5% 1/6W
	R502	QRD161J-184	C RESISTOR		180K 5% 1/6W
	R503	QRD161J-822	C.RESISTOR		8.2K 5% 1/6W

▲	REF.	PARTS NO.	PARTS NAME		REMARKS
	R504	QRD161J-472	C.RESISTOR		4.7K 5% 1/6W
	R505	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R506	QRD161J-681	C.RESISTOR		680 5% 1/6W
	R507	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R508	QRD161J-333	C.RESISTOR		33K 5% 1/6W
	R509	QRD161J-222	C.RESISTOR		2.2K 5% 1/6W
	R510	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R511	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R512	QRD161J-123	C.RESISTOR		12K 5% 1/6W
	R513	QRD161J-682	C.RESISTOR		6.8K 5% 1/6W
	R514	QRD161J-473	C.RESISTOR		47K 5% 1/6W
	R515	QRD161J-473	C.RESISTOR		47K 5% 1/6W
	R516	QRD161J-682	C.RESISTOR		6.8K 5% 1/6W
	R517	QRD161J-822	C.RESISTOR		8.2K 5% 1/6W
	R519	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R520	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R521	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R522	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R523	QRD161J-562	C RESISTOR		5.6K 5% 1/6W
	R524	QRD161J-152	C.RESISTOR		1.5K 5% 1/6W
	R525	QRD161J-683	C.RESISTOR		68K 5% 1/6W
	R526	QRD161J-682	C.RESISTOR		6.8K 5% 1/6W
	R527	QRD161J-564	C RESISTOR		560K 5% 1/6W
	R528	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R531	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R532	QRD161J-153	C.RESISTOR		15K 5% 1/6W
	R533	QRD161J-393	C RESISTOR		39K 5% 1/6W
	R534	QRD161J-153	C.RESISTOR		15K 5% 1/6W
	R536	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R537	QRD161J-183	C.RESISTOR		18K 5% 1/6W
	R538	QRD161J-153	C.RESISTOR		15K 5% 1/6W
	R539	QRD161J-333	C.RESISTOR		33K 5% 1/6W
	R540	QRD161J-682	C.RESISTOR		6.8K 5% 1/6W
	R541	QRD161J-473	C.RESISTOR		47K 5% 1/6W
	R542	QRD161J-273	C RESISTOR		27K 5% 1/6W
	R543	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R544	QRD161J-182	C RESISTOR		1.8K 5% 1/6W
	R545	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R546	QRD161J-104	C.RESISTOR		100K 5% 1/6W
	R547	QRD161J-473	C.RESISTOR		47K 5% 1/6W
	R548	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R549	QRD161J-181	C RESISTOR		180 5% 1/6W
	R559	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R560	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R565	QRD161J-683	C.RESISTOR		68K 5% 1/6W
	R566	QRD161J-181	C RESISTOR		180 5% 1/6W
	R570	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R573	QRD161J-183	C.RESISTOR		18K 5% 1/6W
	R587	QRD161J-102	C.RESISTOR		1.0K 5% 1/6W
	R588	QRD161J-103	C.RESISTOR		10K 5% 1/6W

REF.	PARTS NO.	PARTS NAME	REMARKS
R589	QRD161J-104	C.RESISTOR	100K 5% 1/6W
R590	QRD161J-183	C.RESISTOR	18K 5% 1/6W
R591	QRD161J-122	C RESISTOR	1.2K 5% 1/6W
R592	QRD161J-105	C RESISTOR	1.0M 5% 1/6W
R593	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R594	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R595	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R596	QRD161J-100	C RESISTOR	10 5% 1/6W
R597	QRD161J-820	C.RESISTOR	82 5% 1/6W
R620	QRD161J-272	C.RESISTOR	2.7K 5% 1/6W
R621	QRD161J-272	C.RESISTOR	2.7K 5% 1/6W
R622	QRD161J-272	C.RESISTOR	2.7K 5% 1/6W
R623	QRD161J-272	C.RESISTOR	2.7K 5% 1/6W
R640	QRD161J-821	C RESISTOR	820 5% 1/6W
R641	QRD161J-470	C RESISTOR	47 5% 1/6W
R642	QRD161J-153	C.RESISTOR	15K 5% 1/6W
R643	QRD161J-153	C.RESISTOR	15K 5% 1/6W
R646	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R647	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R649	QRD161J-102	C.RESISTOR	1.0K 5% 1/6W
R650	QRD161J-151	C RESISTOR	150 5% 1/6W
R660	QRD161J-272	C.RESISTOR	2.7K 5% 1/6W
R661	QRD161J-272	C.RESISTOR	2.7K 5% 1/6W
R662	QRD161J-332	C.RESISTOR	3.3K 5% 1/6W
R663	QRD161J-332	C.RESISTOR	3.3K 5% 1/6W
R664	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R665	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R666	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R667	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R668	QRD161J-332	C.RESISTOR	3.3K 5% 1/6W
R669	QRD161J-332	C.RESISTOR	3.3K 5% 1/6W
R672	QRD161J-122	C RESISTOR	1.2K 5% 1/6W
R673	QRD161J-122	C RESISTOR	1.2K 5% 1/6W
R675	QRD161J-470	C RESISTOR	47 5% 1/6W
R676	QRV141F-2702AY	CMF RESISTOR	27 1/4W
R677	QRD161J-273	C RESISTOR	27K 5% 1/6W
R678	QRV141F-1002AY	CMF RESISTOR	10 1/4W
R679	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R680	QRD161J-470	C RESISTOR	47 5% 1/6W
R681	QRV141F-2702AY	CMF RESISTOR	27 1/4W
R682	QRV141F-1002AY	CMF RESISTOR	10 1/4W
R683	QRD161J-470	C RESISTOR	47 5% 1/6W
R684	QRV141F-2702AY	CMF RESISTOR	27 1/4W
R685	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R686	QRV141F-1002AY	CMF RESISTOR	10 1/4W
R687	QRD161J-473	C.RESISTOR	47K 5% 1/6W
R688	QRD161J-473	C.RESISTOR	47K 5% 1/6W
R689	QRD161J-103	C.RESISTOR	10K 5% 1/6W
R690	QRD161J-470	C RESISTOR	47 5% 1/6W
R691	QRD161J-273	C RESISTOR	27K 5% 1/6W

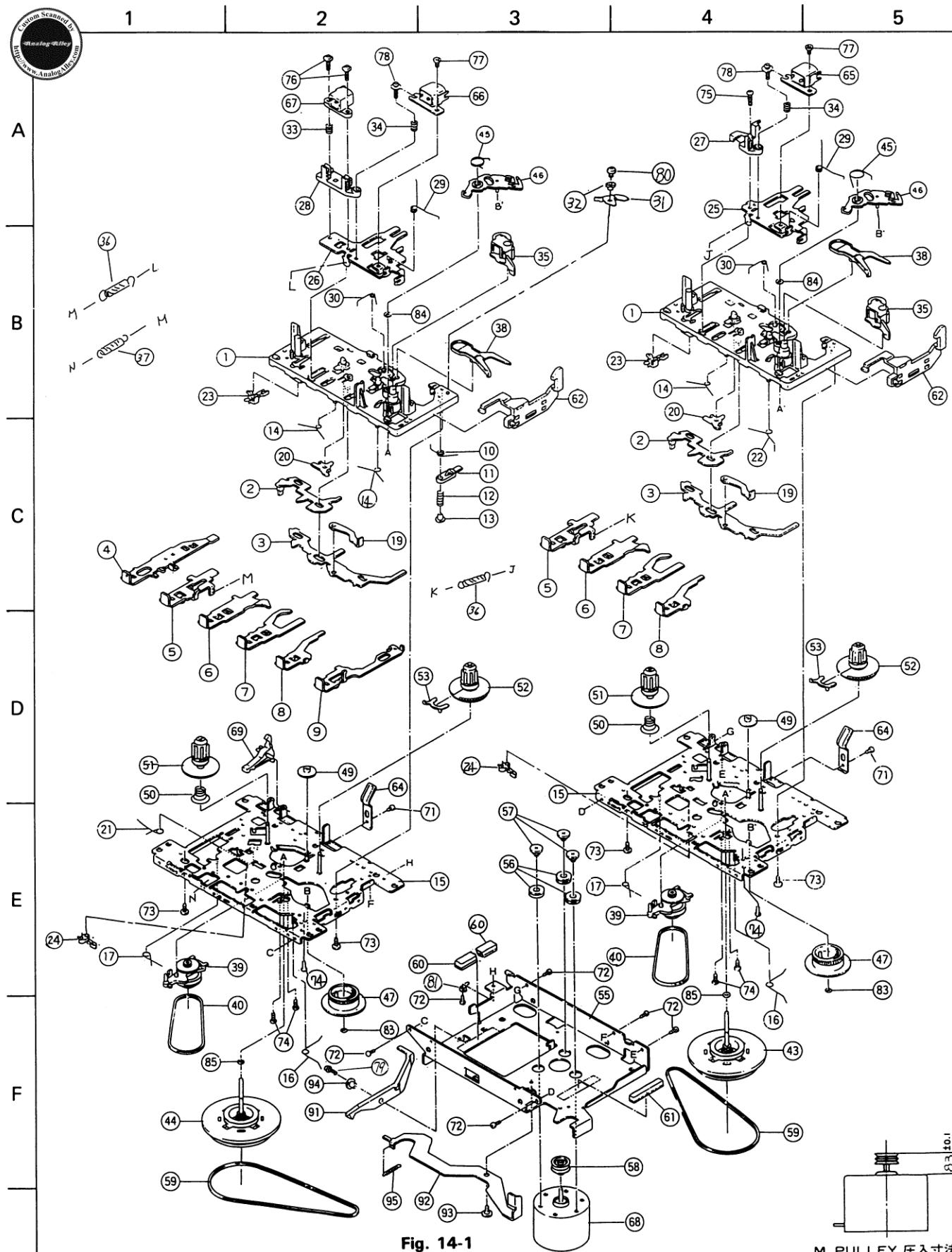
A	REF.	PARTS NO.	PARTS NAME		REMARKS
	R692	QRD161J-563	C RESISTOR		56K 5% 1/6W
	R693	QRD161J-334	C.RESISTOR		330K 5% 1/6W
	R694	QRD161J-470	C RESISTOR		47 5% 1/6W
	R695	QRD161J-273	C RESISTOR		27K 5% 1/6W
	R696	QRD161J-223	C.RESISTOR		22K 5% 1/6W
	R697	QRD161J-103	C.RESISTOR		10K 5% 1/6W
	R698	QRD161J-183	C.RESISTOR		18K 5% 1/6W
	R699	QRD121J-2R2	C RESISTOR		2.2 5% 1/2W
	VR501	QVZ3523-104AZ	SEMI.V.RESISTOR		
	VR502	QVZ3523-203AZ	V RESISTOR		
	X601	VCX5016-934V	CRYSTAL		

## ■ CD Amplifier Board Parts List : Drawing No. VMW1220

REF.	PARTS NO.	PARTS NAME		REMARKS
CN701	VMC0161-012	CONNECTOR		
C701	QER61AM-107ZM	E CAPACITOR		100MF 20% 10V
C702	QER41EM-475	E CAPACITOR		4.7MF 20% 25V
D701	MA165	SI DIODE		
D702	MA165	SI DIODE		
D703	MA165	SI DIODE		
D704	MA165	SI DIODE		
D705	MA165	SI DIODE		
D706	MA165	SI DIODE		
D707	MA165	SI DIODE		
D708	MA165	SI DIODE		
D710	MA165	SI DIODE		
D711	MA165	SI DIODE		
D712	MA165	SI DIODE		
IC701	MN158631JRR-2	IC		
LCD02	VGL1086-001	LCD		
Q701	2SA1175	TRANSISTOR		
Q702	2SC1685(Q,R)	TRANSISTOR		
Q703	2SC1685(Q,R)	TRANSISTOR		
R701	QRD161J-103	C.RESISTOR		10K 5% 1/6W
R702	QRD161J-332	C.RESISTOR		3.3K 5% 1/6W
R703	QRD161J-153	C.RESISTOR		15K 5% 1/6W
R704	QRD161J-473	C.RESISTOR		47K 5% 1/6W
R705	QRD161J-103	C.RESISTOR		10K 5% 1/6W
R706	QRD161J-473	C.RESISTOR		47K 5% 1/6W
R707	QRD161J-473	C.RESISTOR		47K 5% 1/6W
R708	QRD161J-473	C.RESISTOR		47K 5% 1/6W
R709	QRD161J-473	C.RESISTOR		47K 5% 1/6W
R710	QRD161J-473	C.RESISTOR		47K 5% 1/6W
R711	QRD161J-103	C.RESISTOR		10K 5% 1/6W
R713	QRD161J-152	C.RESISTOR		1.5K 5% 1/6W
R714	QRD161J-152	C.RESISTOR		1.5K 5% 1/6W
R715	QRD161J-152	C.RESISTOR		1.5K 5% 1/6W
R716	QRD161J-272	C.RESISTOR		2.7K 5% 1/6W
R717	QRD161J-272	C.RESISTOR		2.7K 5% 1/6W
S701	QSP4H11-V05Z	TACT SWITCH		
S702	QSP4H11-V05Z	TACT SWITCH		
S703	QSP4H11-V05Z	TACT SWITCH		
S704	QSP4H11-V05Z	TACT SWITCH		
S705	QSP4H11-V05Z	TACT SWITCH		
S706	QSP4H11-V05Z	TACT SWITCH		
S707	QSP4H11-V05Z	TACT SWITCH		
S708	QSP4H11-V05Z	TACT SWITCH		
S710	QSP2K21-V01	PUSH SWITCH		
X701	EFO-GC4194A4	CERAMIC RESONAT		



## **13 Exploded View of Cassette Mechanism Component Parts and Parts List**



**Fig. 14-1**

M PULLEY 壓入寸法  
1921-12-318-2

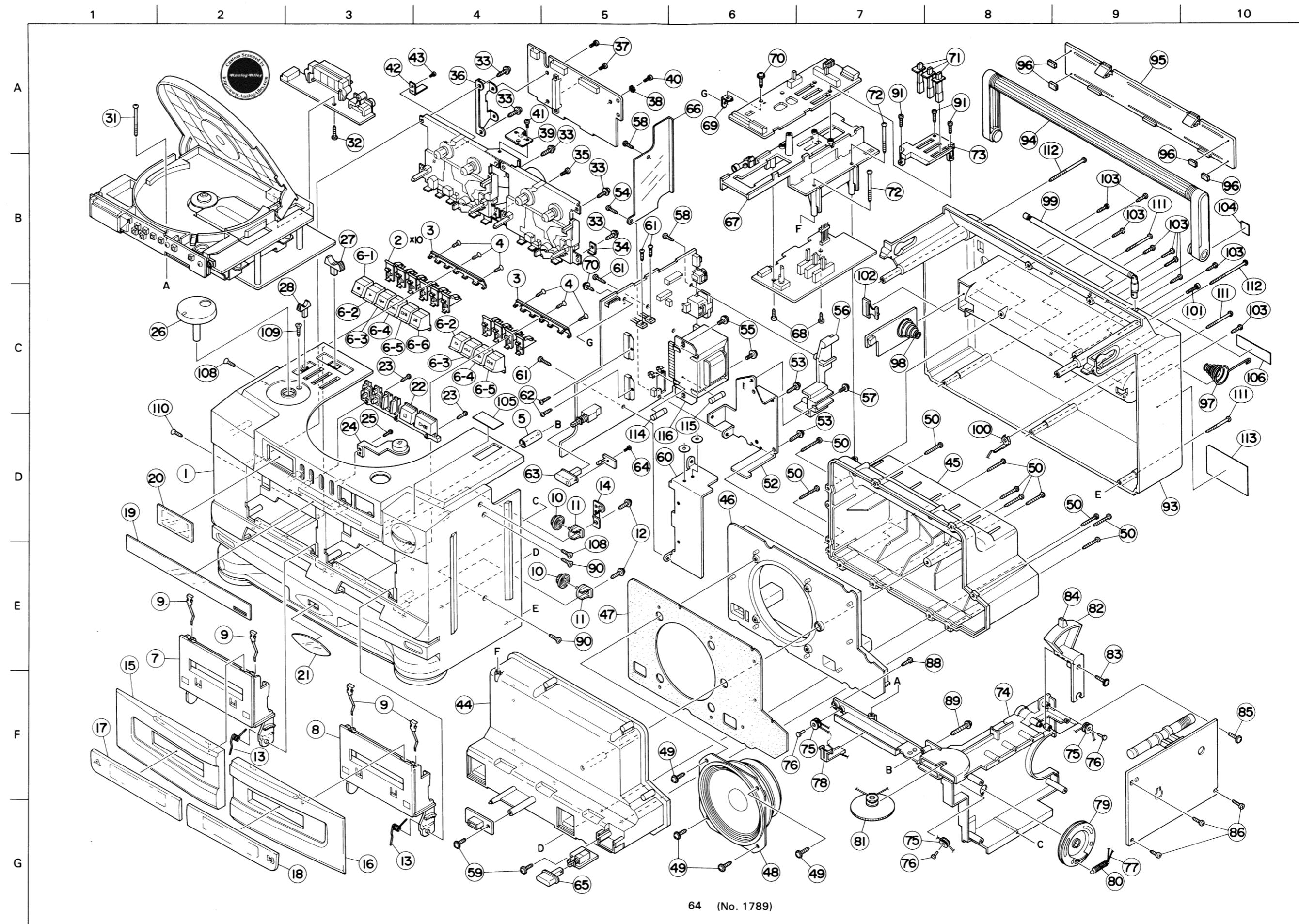
■ Cassette Mechanism Component Parts List

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	192114301	BASE ASS'Y		2
	2	19211409	SWITCH ACTUATOR		2
	3	19211438	PUSH BUTTON ACTUATOR		2
	4	19211422	BUTTON LEVER	REC	1
	5	19211484	BUTTON LEVER	PLAY	2
	6	19211424	BUTTON LEVER	REW	2
	7	91211425	BUTTON LEVER	FF	2
	8	19211426	BUTTON LEVER	STOP	2
	9	19211461	BUTTON LEVER	PAUSE	1
	10	19211413	P CONTROL SPRING		1
	11	19211455	PAUSE LEVER (E)		1
	12	19211412	PAUSE LEVER SPRING		1
	13	19211411	PAUSE STOPPER		1
	14	19211414	BUTTON LEVER SPRING (A)		3
	15	192101501	CHASSIS ASS'Y		2
	16	19211416	E ACTUATOR SPRING		2
	17	19211417	P.S. LEVER SPRING		2
	19	182101159	E KICK LEVER		2
	20	19211420	P.R. STOPPER		2
	21	19211421	BUTTON LEVER SPRING	REC	1
	22	19211433	BUTTON LEVER SPRING (C)		1
	23	640101149	LEAF SWITCH	MSW-1541T	2
	24	640101161	LEAF SWITCH	MSW-17820MDVO	2
	25	19210311	HEAD PANEL		1
	26	19210312	HEAD PANEL		1
	27	19210304A	HEAD BASE		1
	28	19210306	HEAD BASE		1
	29	19210309	PANEL P SPRING		2
	30	19211418	M CONTROL SPRING		2
	31	19211437	P. ARM. COLLER		1
	32	19211434	P. ARM		1
	33	18210308	EH SPRING		1
	34	18210307	AZIMUTH SPRING		2
	35	192104306	PINCH ROLLER ARM ASS'Y		2
	36	18210150	BUTTON LEVER SPRING (S)	PLAY	2
	37	18211311	E. SLIDE LEVER SPREING		1
	38	19212604T	SENSING LEVER		2
	39	192107302	RF CLUTCH ASS'Y		2
	40	18210711	RF BELT		2
	43	192109310	FLYWHEEL ASS'Y		1
	44	192109309	FLYWHEEL ASS'Y		1
	45	19212605	GEAR PLATE SPRING		2
	46	192126502	GEAR PLATE ASS'Y		2
	47	19212602	CAM GEAR		2
	49	18211070	FF GEAR		2
	50	18291010	BACK TENSION SPRING		2
	51	192105304	SUPPLY REEL ASS'Y		2
	52	192105303	TAKE UP REEL ASS'Y		2
	53	19210506	SENSER		2
	55	19211210	MOTOR BRACKET		1

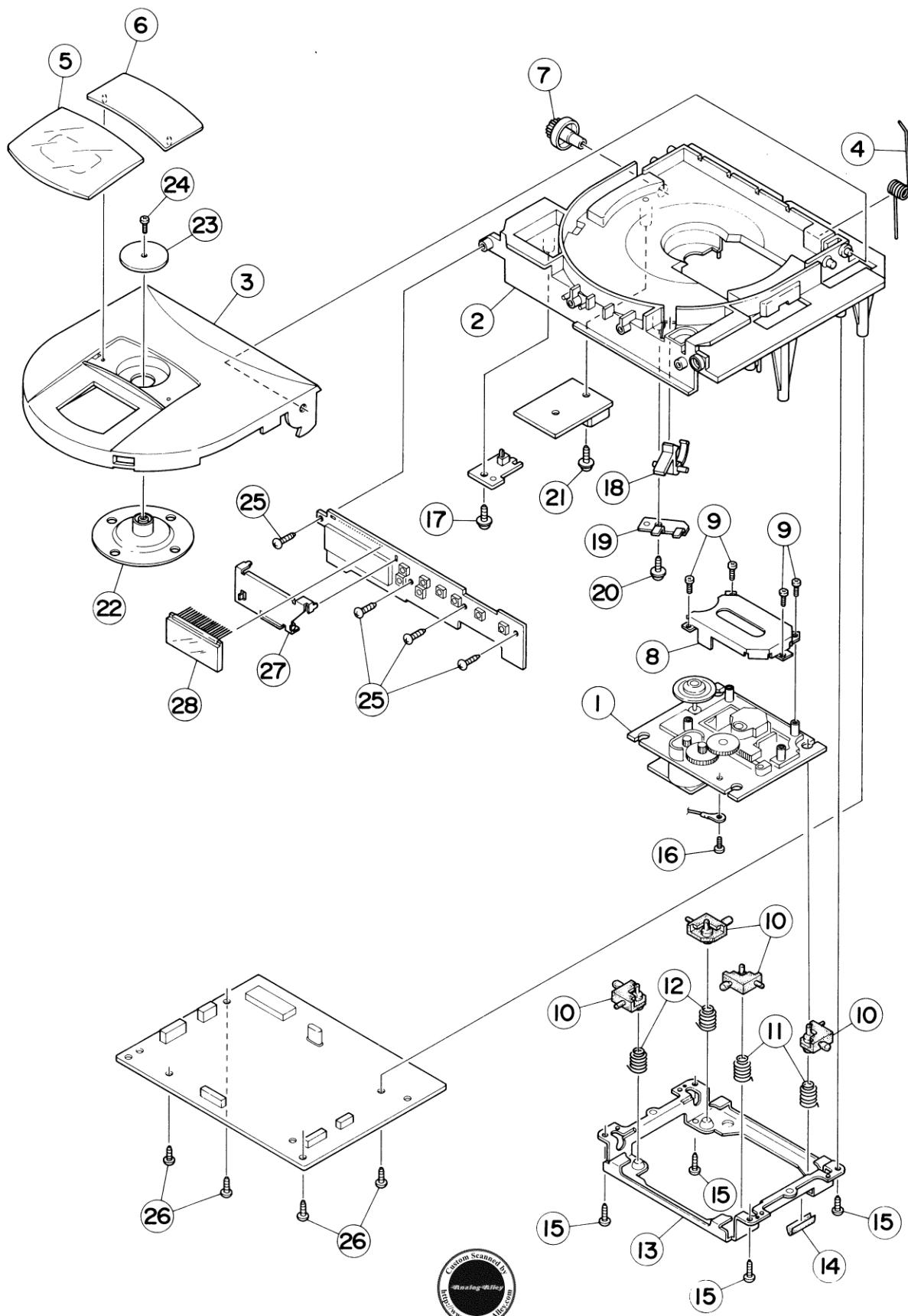
△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	56	18211266	MOTOR RUBBER		3
	57	18511418	MOTOR COLLER SCREW		3
	58	19211205A	MOTOR PULLEY		1
	59	19210906	MAIN BELT		2
	60	18211278	ANTI VIBRATION FELT MAT		2
	61	182112126	ANTI VIBRATION FELT MAT		1
	62	19211302	EJECT SLIDE LEVER		2
	64	18291001	PACK SPRING	VGH0421-020	2
	65	62020178	P. HEAD	VGH0421-020	1
	66	62020178	R.P. HEAD		1
	67	62021421	E. HEAD	LE15A-C1	1
	68	6003-02-26	MOTOR	SHU-9L53	1
	69	18211069	RECORD SAFETY LEVER		1
	71	91790000	C. TAPPING SCREW	M2x3	2
	72	91800000	C. TAPPING SCREW	M2x4	6
	73	96790000	P. TAPPING BING SCREW	M2x5	4
	74	99991809	TAPPING SCREW (FOR CAMERA)	M2x4.5	6
	75	90040000	SCREW	M2x6	1
	76	92230000	+ - CAP SCREW	M2x7.5	2
	77	91150000	+ BIND SCREW	M2x3	2
	78	99220000	AZIMUTH SCREW	M2x7	2
	79	91820000	C. TAPPING SCREW	M2x6	1
	80	99992041	P.S. TAPPING SCREW	M2x3	1
	81	94800000	LUG	3B)2.0	1
	83	94220000	P. WASHER CUT	1.2x3.8x0.3	2
	84	99990313	P. WASHER CUT	1.45x3.8x0.5	2
	85	97860000	P. WASHER	2x3.5x0.3	2
	91	19211209	P. KICK LEVER (B)		1
	92	182112154	P. KICK LEVER (A)		1
	94	18211265	COLLER (B)		1
	95	18211225	P. KICK LEVER SP		1

## 14 Exploded View of Enclosure Component Parts and Parts List

(This PARTS LIST can be found in the page 68.)



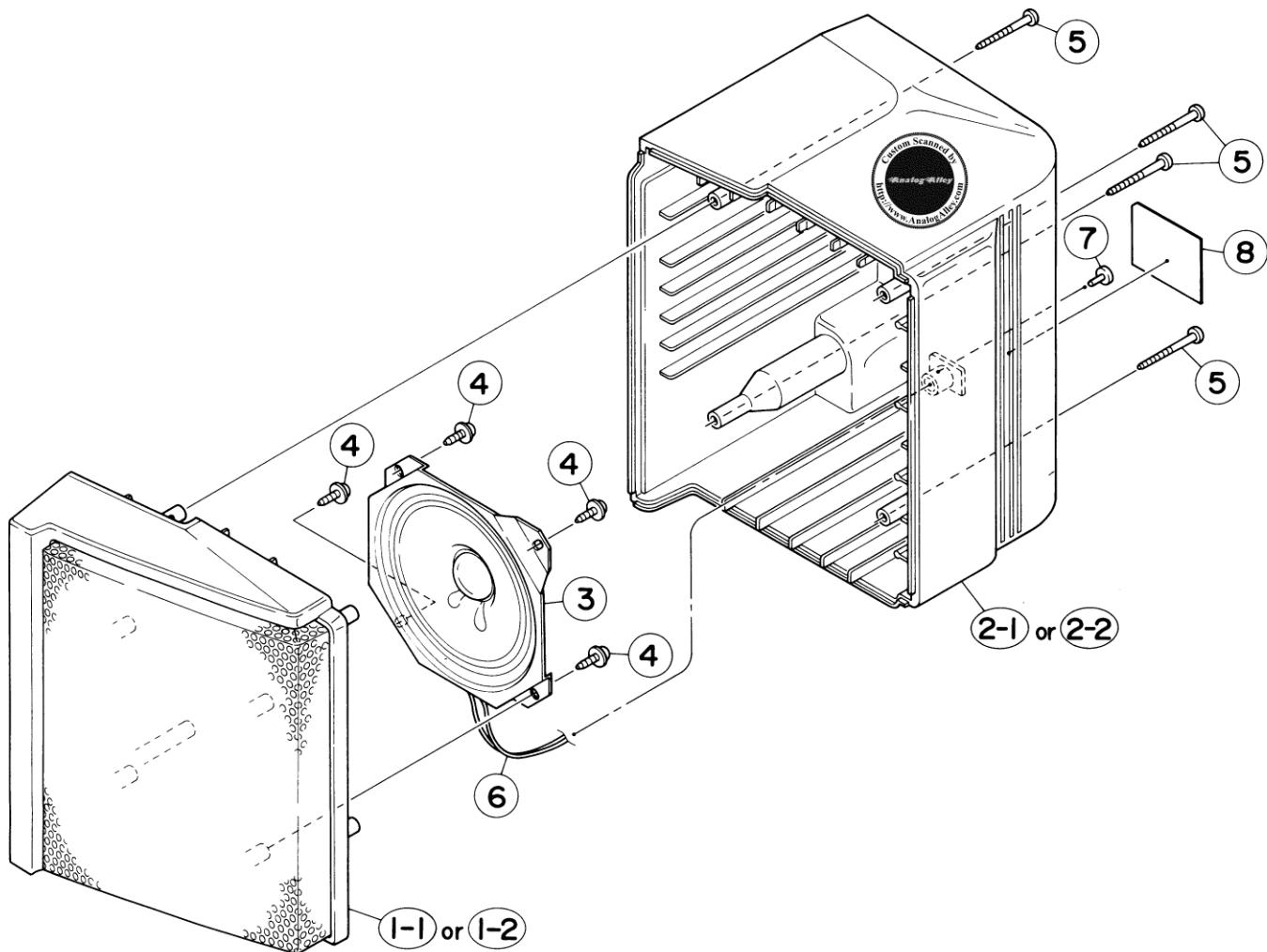
■ CD Player Section



## ■ CD Player Component Parts List

▲	REF.	PARTS NO.	PARTS NAME	REMARKS	Q.T.Y
	1	KSM-150B-AJ-J	CD MECHA		1
	2	VJC1929-001	CD CASE		1
	3	VJT1033-001	CD DOOR		1
	4	VKW4921-001	CD DOOR SPRING		1
	5	VJD3854-001	CD LENS		1
	6	VJD3855-001	CD ORNAMENT		1
	7	VYH4769-002	GEAR		1
	8	VJD5091-003	PICK COVER		1
	9	SDSF2006M	SCREW		4
	10	VYH6596-001	CD CUSHION		4
	11	VKW4693-101	CONICAL SPRING		2
	12	VKW4693-102	CONICAL SPRING		2
	13	VYH6731-004	SUB CHASSIS		1
	14	VYSA1R4-095	SPACER		1
	15	SBSF3008Z	SCREW	CASE+SUS CHASSIS	4
	16	SDST2606Z	SCREW	EARTH	1
	17	SBSF3008Z	SCREW	LEAF SWITCH	1
	18	VYH7222-001	LOCK ARM	LOCK ARM	1
	19	VYH7223-001	BRACKET	LOCK ATM	1
	20	SBSF3008Z	SCREW	BRACKET	1
	21	SBSF3008Z	SCREW		1
	22	VYH6603-00A	CLAMPER ASS'Y		1
	23	VYH6517-001	CLAMPER PLATE		1
	24	SDSF2006M	SCREW		1
	25	SBSF3008Z	SCREW	CASE+PWB	4
	26	SBSF3008Z	SCREW	CD CASE+CD PWB	4
	27	VYH7225-002	LCD HOLDER		1
	28	VGL1086-001	LCD	LCD02	1

## ■ Speaker Box Section



## ■ Speaker Box Section Parts List

REF.	PARTS NO.	PARTS NAME	REMARKS	Q.TY
1-1	VJC2375-00C	FRONT PANEL (R)	RIGHT SIDE	1
1-2	VJC2374-00C	FRONT PANEL (L)	LEFT SIDE	1
2-1	VJC1833-001	REAR CABINET	RIGHT SIDE	1
2-2	VJC1831-001	REAR CABINET	LEFT SIDE	1
3	EAS10P463C	SPEAKER		1
4	GBSF3010Z	TAPPING SCREW	FRONT + SPEAKER	4
5	SBSF3035Z	SCREW	FRONT + REAR	4
6	VMP0040-001T	SPEAKER CODE	L, R	2
7	TEP357469-02	STOPPER	L, R	2
8	VYN7054-001B	NAME PLATE	L, R	2

## ■ Enclosure Component Parts List

 parts are safety assurance parts.  
When replacing those parts, make sure to use the specified one.

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
1, 19, 20,21	ZCRCX100J-FBK	FRONT CABINET ASS'Y		1
7,9,17	ZCRCX100K-CBKA	CASSETTE CASE ASS'Y		1
8,9,16	ZCRCX100K-CBKB	CASSETTE CASE ASS'Y		1
1 2 3 4 5	VJC1924-001UL VKS4843-002 VKL5960-003 SSSF2608Z VYH7307-001	FRONT CABINET BUTTON LEVER BUTTON BRACKET SCREW JOINT BAR		1 10 2 6 1
6-1 6-2 6-3 6-4 6-5	VXP3391-001 VXP3391-002 VXP3391-003 VXP3391-004 VXP3391-005	MECHA BUTTON MECHA BUTTON MECHA BUTTON MECHA BUTTON MECHA BUTTON	REC PLAY REW FF STOP/EJECT	1 2 2 2 2
6-6 7 8 9 10	VXP3391-006 VJT2253-001 VJT2253-002 VKY4180-001 VYH5601-001	MECHA BUTTON C.HOLDER (A) C.HOLDER(B) CASSETTE SPRING GEAR	PAUSE	1 1 1 4 2
11 12 13 14 15	VYH5602-001 GBSF3012Z VKW4926-001 VYH6768-001 VJD2356-001	DAMPER HOLDER SCREW DOOR SPRING SUPPORT BRACKET DOOR COVER(L)		2 2 2 1 1
16 17 18 19 20	VJD2356-002 VJD3851-001 VJD3851-002 VJK3521-005 VJD5306-002	DOOR COVER(R) DOOR LENS(L) DOOR LENS(R) DIAL LENS LCD LENS		1 1 1 1 1
21 22 23 24 25	VJD5307-002 VXP3393-001 SBSF2608Z VJD5308-001 SBSF2608Z	3D LENS CD BUTTON SCREW CD EJECT BUTTON SCREW	CD BUTTON EJECT BUTTON	1 1 2 1 1
26 27 28 31 32	VXL4364-001 VXS4358-002 VXS4359-002 SBSF3030M SBSF3010Z	VOLUME KNOB SLIDE KNOB SLIDE KNOB SCREW SCREW	FUNCTION METAL/NORMAL	1 1 1 1 1
33 34 35 36 37	GBSF3012Z VYH7318-002 SDST3006Z VYH7224-002 SDST3006Z	SCREW SUPPORT BKT SCREW REC BRACKET SCREW	MECHA+FRONT MECHA+SUPPORT BKT REC BKT+REC PWB	5 1 1 1 2
38 39 40 41 42	WBS3000N VYH7065-001 SDST3006Z SDST2604Z VKY4617-001	WASHER BRACKET SCREW SCREW REC LEVER	REC EARTH BKT+REC PWB BKT+MECHA	1 1 1 1 1

**⚠ parts are safety assurance parts.**

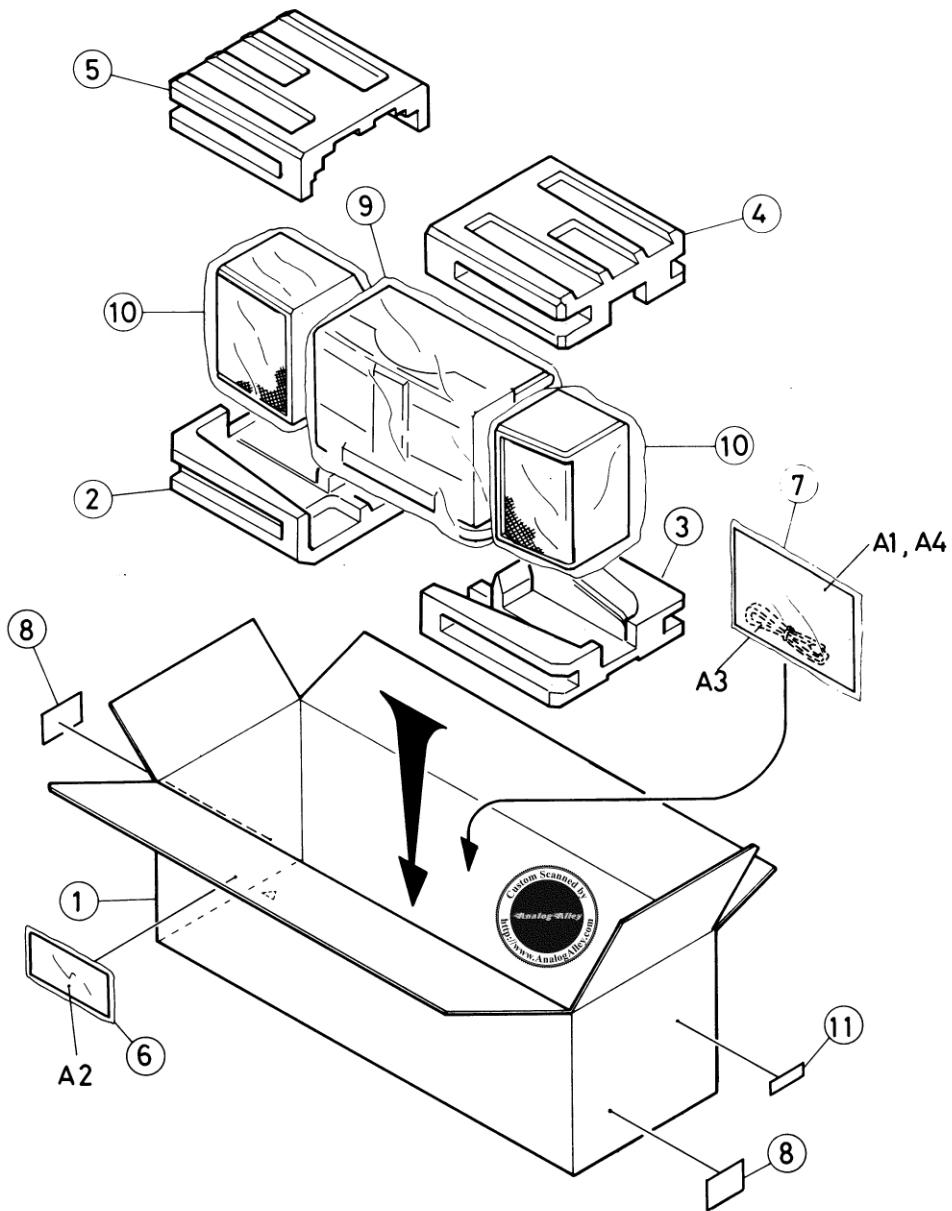
When replacing those parts, make sure to use the specified one.

REF.	PARTS NO.	PARTS NAME	REMARKS	Q.TY
43	SDST2003Z	SCREW		1
44	VYH1207-002	3D COVER(F)		1
45	VYH1208-002	3D COVER(R)		1
46	VYH2249-002	3D BASE		1
47	VYH3594-001	SPACER		1
48	EAS10PL429G1	SPEAKER		1
49	GBSF3012Z	SCREW	SPEAKER	4
50	SBSF3020Z	SCREW	3D(F)+3D(R)	8
52	SBSF3020Z	SCREW	F.CABI+3D	2
	VYH3595-001	TRANS BRACKET		1
53	GBSF3012Z	SCREW	T.BKT+3D	2
54	SDST3006Z	SCREW		1
55	VKZ3001-004	SPECIAL SCREW	T.BKT+TRANS	2
56	VYH3641-001	AC HOLDER	3D(F)+3D PWB	1
57	GBST3008Z	TH.TAP.SCREW		1
58	SBSF3008Z	SCREW		2
59	GBSF3010Z	TAPPING SCREW	3D(F)+PWB	2
60	VYH3596-001	HEAT SINK		1
61	SBSF3008Z	SCREW	HEAT SINK	4
62	SBSF2608Z	SCREW		2
63	VXP4995-002	POWER KNOB	POWER	1
64	SDSF2006M	SCREW		1
65	VXP4996-002	3D KNOB	3D	1
66	VYH7233-001	SHIELD		1
67	VYH2250-001	AMP CHASSIS		1
68	SBSF3008Z	SCREW	AMP CHA+PWB	2
69	VYH4638-001	BRACKET		1
70	LPSP3005Z	SCREW		2
71	VXS4360-002	SLIDE KNOB	SEA	3
72	SBSF3050Z	SCREW	3D+AMP.CHAS	2
73	VYH7304-001	SEA HOLDER		1
74	VYH1212-001	TUNER CHASSIS		1
75	V40409-2	ROLLER		4
76	VYH4034-003	STUD		4
77	VHR2ZK9-05AT	DIAL STRING		0
78	VJN4137-001	NEEDLE		1
79	VYH7238-001	DIAL DRUM		1
80	50153-3	SPRING		1
81	VXL4259-002	TUNING KNOB		1
82	VYH3598-001	BAND LEVER		1
83	GBSF3012Z	SCREW	BAND LEVER	1
84	VXQ4061-002	LEVER CAP	BAND LEVER	1
85	GBSF3012Z	SCREW	T.CHA+T.PWB	1
86	SBSF3010Z	SCREW		3
88	SBSF3010Z	SCREW	T.CHA+F.CABI	1
89	SBSF3020Z	SCREW		1
90	SSSF3012M	T. SCREW	T.CHA+F.CABI	2
91	SBSF2610Z	SCREW		3
93	VJC1925-001UL	REAR CABINET		1

**⚠ parts are safety assurance parts.**  
When replacing those parts, make sure to use the specified one.

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
94	VJH4092-00K	HANDLE ASS'Y		1
95	VJC2016-008	BATTERY COVER		1
96	VYSH101-015	SPACER		4
97	VYH5657-001	BATTERY SPRING		1
98	VYH5483-001	BATTERY SPRING	BATT.PWB	1
99	VJA3006-00E	ROD ANTENNA		1
100	VYH5012-004	TERMINAL LUG		1
101	SDSP3012N	SCREW	ANTENNA	1
102	VYH7232-003	AC SLIDER	PC-X100J/U	1
103	SBSF3012N	SCREW	SP TERMINAL	2
	SBSF3012N	SCREW	CD OUT	1
	SBSF3012N	SCREW	CD CASE+REAR	2
	SBSF3012N	SCREW	REAR+3D	2
	SBSF3012N	SCREW	3D+REAR	2
104	VND4887-001	CAUTION LABEL		1
105	VND4317-002	CAUTION SEAL		1
106	VND4285-001	CAUTION LABEL		1
	VND4285-002	CAUTION LABEL		1
	VND4285-003	CAUTION LABEL		1
	VND4285-006	CAUTION LABEL		1
108	SSSF3012M	T. SCREW	FRONT	2
109	SSSF3012M	T. SCREW		1
110	SSST3008M	SCREW	F.CABI+T.BKR	1
111	SBSF3040Z	SCREW	FRONT+REAR	3
112	SDSF3065Z	SCREW	FRONT+REAR	2
113	VYN7054-001	NAME PLATE		1
114	QMFO007-5R0J1	FUSE	F998	1
115	QMFS1N2-R60J1	FUSE	F999	1
116	VTP57P2-12B	POWER TRANS.	T999	1

## 15 Illustration Packing and Packing Parts List



### ■ Packing Parts List

REF.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
1	VPC7054-001	CARTON		1
2	VPH1523-001	CUSHION	FOR BOTTOM : L	1
3	VPH1523-002	CUSHION	FOR BOTTOM : R	1
4	VPH1524-001	CUSHION	FOR UPPER : R	1
5	VPH1524-002	CUSHION	FOR UPPER : L	1
6	E66416-003	ENVELOPE	FOR WARRANTY CARD	1
7	VPE3005-004	POLY BAG	FOR INSTRUCTIONS	1
8	VND3044-002	SERIAL TICKET		2
9	VPE3005-026	POLY BAG	FOR UNIT	1
10	VPE3005-018	POLY BAG	FOR SPEAKER	2
11	VND3070-008	UPC CODE LABEL		1
12	VPK4002-016	SHEET		1

## 16 Accessories

 parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

	REF.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
	A1	VNN7054-611	INSTRUCTION BOOK		1
	A2	BT-20047D	WARRANTY CARD		1
		BT-20108A	WARRANTY CARD		1
	A3	QMP1240-183	POWER CORD		1
	A4	BT-20044F	SAFETY INSTRUCTION		1



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